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Sri Lanka: Fostering Workforce Skills through Education (Employment Diagnostic Study)

Abstract

Empowered Sri Lanka, Sri Lanka's development policy document, envisions reorienting the country toward a modern and high-value-adding economy that is able to compete in the global market. Expanding the middle class and improving the living standards by creating one million jobs are at the core of the policy. This report seeks to support the realization of that vision by analyzing Sri Lanka's employment situation and drawing recommendations from the analysis. The report starts with an overview of the labor market in relation to both supply and demand. It then looks at the issues of aging and skills generation. The concluding chapter examines links between labor market trends, informality, and poverty.

Keywords

Sri Lanka, employment, labor market, skills training, education

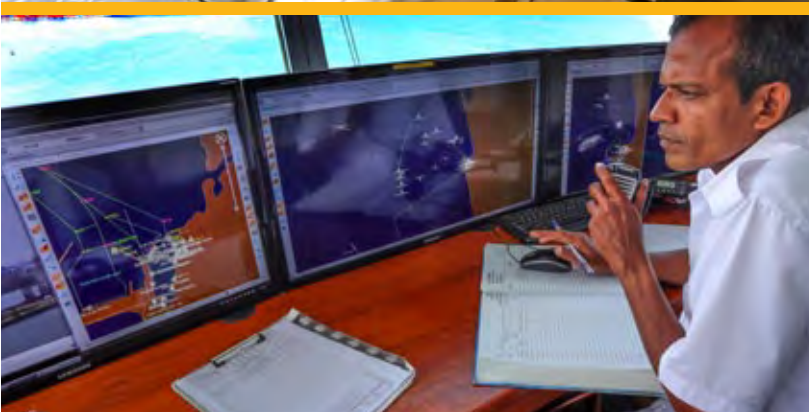
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Suggested Citation

Asian Development Bank. (2017). *Sri Lanka: Fostering workforce skills through education (Employment diagnostic study)*. Mandaluyong City, Philippines: Author.

Required Publisher's Statement

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SRI LANKA

FOSTERING WORKFORCE SKILLS THROUGH EDUCATION

Employment Diagnostic Study



SRI LANKA

FOSTERING WORKFORCE SKILLS THROUGH EDUCATION

Employment Diagnostic Study

Co-publication of the Asian Development Bank and the International Labour Organization,
Regional Office for Labour and the Pacific





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Printed in the Philippines.

Publication Stock Number: TCS179120-2

ISBN: ADB 978-92-9261-004-3 (print), 978-92-9261-005-0 (electronic)

ILO 978-92-2-129655-3 (print), 978-92-2-129672-0 (electronic)

DOI: <http://dx.doi.org/10.22617/TCS179120-2>

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Foreword

Empowered Sri Lanka, Sri Lanka's development policy document, envisions reorienting the country toward a modern and high-value-adding economy that is able to compete effectively in the global market. Expanding the middle class and improving the living standards by creating 1 million jobs are at the core of the policy. This employment diagnostic study—*Sri Lanka: Fostering Workforce Skills*—seeks to support the realization of that vision.

The country's economy has been growing at an average of 6.4% for more than a decade (2004–2015). The growth was largely driven by higher investment and consumption during postwar reconstruction. Although growth has slowed since 2013 due to the difficult external environment, macroeconomic instability, and political transition, the growth outlook remains positive. Real growth of gross domestic product was 4.8% in 2015 and 4.4% in 2016, owing to the strong growth in services, agriculture, and manufacturing, although the latter's contribution is declining marginally. "Working poverty" has declined while the average daily wage rates of casual workers have increased. The differences in wages narrowed across sectors and within skill groups.

The economy's progress, however, may be impacted by an aging population that will put pressure on pensions and social expenditures. The slowing population growth will reduce the labor force participation rate and impede production in the economy. As it is, the country is also losing a large portion of its workforce to overseas employment. In addition, the education system faces new challenges in meeting the requirements of the economy. The poor funding and low enrollment rates in tertiary education and technical and vocational education and training (TVET) have resulted in youth unemployment and mismatches with the skills demanded by the business sector.

Concerted efforts are needed to address the challenges of a decreasing workforce, the poor funding and low participation rates in tertiary education and TVET, and the skills gap. The labor force could be built up by increasing its female participation. This could be achieved by removing barriers and instituting factors that enable and encourage their participation. Also, policies to decrease youth unemployment and increase net immigration, including the return of migrant workers from abroad, should be put in place. Bridging the skills gaps is also imperative. Policies to address these critical issues are discussed in the report.

This study was prepared by a team from the Asian Development Bank (ADB) Economic Research and Regional Cooperation Department (ERCD) under the supervision of Edimon Ginting, director of the Economic Analysis and Operational Support Division, ERCD, ADB, and Donglin Li, International Labour Organization (ILO) country director for Sri Lanka and the Maldives. The study was initially co-led by Utsav Kumar, economist, and Sakiko Tanaka, senior social sector specialist, and subsequently by Kiyoshi Taniguchi, senior economist, who prepared the full draft report. The core project team comprises Ye Xu, young professional, and Lilibeth Poot, economics officer at ADB; Nomaan Majid, senior employment specialist, ILO Decent Work Team for South Asia, and Ramani Gunatilaka, ILO consultant who prepared Chapter 5 of the report; and experts including Nisha Arunatilake (consultant for Chapter

2), Sewin Chan and Ravindra Rannan-Eliya (consultants for Chapter 3), and Priyanka Jayawardena and Ronald Miller (consultants for Chapter 4). Gee Ann Carol Burac and Amanda Isabel Mamon provided administrative support. The report was reviewed by Christopher Manning and Daryll Naval and edited by Jill Gale de Villa and Eric Van Zant. Michael Cortes accomplished the layout, cover design, and typesetting.

The study benefited from inputs from numerous people and organizations. The study team consulted representatives from key government agencies, academic and research institutions, and the private sector about the framework, approach, and findings. The ADB South Asia Regional Department provided useful comments for enhancing the relevance of the report. The authors also acknowledge the excellent support from ADB's Sri Lanka Resident Mission staff, led by country director Sri Widowati, and supported by Tadateru Hayashi, senior economist, in facilitating the dialogue and collaboration with the government.

The study team especially thanks the Government of Sri Lanka for its support.



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Abbreviations

ADB	Asian Development Bank
CBSL	Central Bank of Sri Lanka
CED	Coalition for Educational Development
DCS	Department of Census and Statistics
EPF	Employees' Provident Fund
ESCAP	Economic and Social Commission for Asia and the Pacific
GDP	gross domestic product
HIES	Household Income and Expenditure Survey
ICT	information and communication technology
ILO	International Labour Organization
ISIC	International Standard Industry Classification
LFPR	labor force participation rate
MOE	Ministry of Education
MOFP	Ministry of Finance and Planning
MOHEH	Ministry of Higher Education and Highways
NEC	National Education Commission
NHRDC	National Human Resource Development Council
NIE	National Institute of Education
OECD	Organisation for Economic Co-operation and Development
SLIATE	Sri Lanka Institute of Advanced Technical Education
TVEC	Technical and Vocational Education Commission
TVET	technical and vocational education and training
UGC	University Grants Commission
UNDP	United Nations Development Programme
WDI	World Development Indicators
WHO	World Health Organization

Chapter 1

Summary and Highlights

1.1. Main Themes and Organization

The report starts with an overview of the labor market in relation to both labor supply and demand. It then looks at the issues of aging and skill generation. The concluding chapter examines links between labor market trends, informality, and poverty. The report identifies two major challenges for the labor market in Sri Lanka: (1) coping with the aging of the population; and (2) generating new skills that are currently in demand, and that will drive future productivity growth. Welfare implications of recent growth have been positive, even though this growth has been characterized by increased informalization. Productivity growth has increased, and poverty among the self-employed has declined, both of which have driven a large fall in overall poverty incidence from the mid-2000s. But the slow growth of the formal sector is a problem for the security of employment and investments in human capital.

1.2. Labor Market Assessment

Overall, the Sri Lankan economy continued to grow strongly in the 2000s despite domestic and global shocks. Sri Lanka's economy expanded at an average annual growth rate of 6.4% during 2004–2015. The economic growth, however, has been episodic. After

dipping to 3.5% following the global financial crisis of 2008, postwar recovery and expansion pushed the rate over 9% in 2012. Growth then weakened to an average of 4.4% in recent years, which is attributed to internal and external factors including the winding down of debt-financed post-recovery infrastructure projects and the reduced demand for exports. With relatively good economic growth, the country achieved middle-income status in 2010 and is projected to achieve upper middle-income status in the next few years. Several factors explain the recent healthy income growth per capita. First, the population increased only 0.8% from 2004 to 2015, even while gross domestic product (GDP) per capita purchasing power parity almost doubled to more than \$11,000 in 2015.¹ Second, value-added per worker expanded across all economic sectors (except agriculture) and especially in manufacturing, where productivity growth was high during 2006–2014. Third, the major public sector infrastructure development projects have been playing a pivotal role to underpin economic growth.

The expected slowdown in labor force growth will pose challenges to the economy. In regard to labor supply, projections suggest the labor force will increase very gradually until 2028. It will then start to shrink as the labor force participation rate (LFPR) declines and population growth slows, especially among the working-age population. Labor

¹ In constant 2011 international United States dollars.

force participation declined most among the youth but it also decreased among women and people in rural and estate (plantation) areas; it increased only among college graduates. Sri Lanka is also losing many workers to foreign employment, which has both positive dimensions (especially remittances) as well as negative effects for growth (shortages of blue collar workers).

The country has not produced enough jobs for its labor force, leading to an increase in vulnerable employment. On the demand side, the number of formal jobs grew slowly and vulnerable employment accounted for a high share of jobs. Job creation has not kept pace with the rising working-age population and almost one-third of all jobs remain in low-productivity agriculture. Just over half of the jobs created were in the public sector. But at the same time the increase in jobs included a nominal increase in vulnerable employment—in self-employed or unpaid family work. Employment elasticities fell from the early 2000s, partly because of slower economic and labor force growth, and partly due to the loss of jobs in agriculture, as people moved into a range of service activities. Although public sector jobs increased faster than private sector jobs in the formal sector, manufacturing was the biggest contributor to new jobs especially in the most recent period, 2010–2014. The increase in employment was mainly in urban areas (i.e., of the 366,918 new jobs, 88.3% were urban).

Even though gender gaps in average earnings remained large, the monthly real earnings of wage employees increased, particularly for the less educated. Real wages rose overall during 2006–2014, especially during the reconstruction period of 2011–2013. The sharp wage rises for the less educated suggests the beginning of a tightening of labor markets for unskilled workers. The largest increases were in unspecified other services, followed by agriculture and mining. Consistent with improving real wages, unemployment has also fallen to under 5%. However, the gaps between the male and female average earnings and unemployment rates remained high.

1.3. Demographic Change and Labor Market Impacts

The population will age rapidly during the next few decades, which will slow labor force growth, and may cause it to contract. Sri Lanka's population is aging rapidly. Both fertility and especially mortality declined relatively early by regional standards. By 1994, Sri Lanka's total fertility rate had already reached the replacement level of 2.1, and the rate continued to fall in the 2000s. Universal health care and free basic education underpinned these changes. As a result, the working population grew rapidly starting in the 1970s, producing a low dependency ratio and hence a demographic dividend through to the early 2000s. But by 2015 the share of the elderly population (65 years and above) was beginning to approach 10% and the dependency ratio was beginning to rise more sharply. Rapid aging is expected to continue for the next few decades, which will slow labor force growth. The labor force may shrink outright as early as 2030. A forecasting exercise showing three different aging scenarios (low, middle-, and high-aging scenarios) showed that the elderly population will grow dramatically in the coming decades, bringing an end to the demographic dividend. In the middle-aging scenario, the elderly fraction will have doubled by 2038 relative to the 2015 baseline. The increase in the elderly population will consequently increase the country's dependency ratio, to reach 76% by 2050. The population aging will contribute to a decline in the LFPR.

The population aging will shrink GDP and put moderate pressure on pension and health expenditures. The decline in the working-age population will impact the economy on several fronts. A younger labor force is associated with greater sectoral mobility and greater willingness to adopt new technologies while societal aging reduces labor supply and potentially leaves a less dynamic workforce which poses a challenge for structural transition and economic development. A growth-accounting approach showed that GDP would be more than 7% lower in 2030, simply because of the slower growth of the working-age population. The higher share of the elderly will decrease demographically determined tax

contributions and increase the tax burden on social welfare. Population aging is expected to put moderate pressure on pension expenditure, somewhat offset by recent increases in the retirement age and cushioned by private contributions to the Employees' Provident Fund and a modest plan to extend pensions to farmers. Similarly, the aging population will only put moderate pressures on health expenditure. Maintaining public spending at about 50% of total health spending may be sufficient to cope with most aging pressures until 2030, although the share of overall spending will need to increase, by about 0.5% of GDP. Policies to minimize the fiscal burden of aging should be directed toward reducing barriers to female work and fair wages, thus raising LFPRs among females. Raising the female LFPR to the average level observed in high-income countries would increase the overall labor force by 17%. In addition, it is also imperative to reduce youth unemployment rates, and provide more incentives for migrants to return to work at home rather than abroad.

1.4. Schooling Quality and Skills Development

The Sri Lankan education system has historically been equitable but is underfunded and requires reform to generate the skills needed for future growth. For decades, Sri Lanka has demonstrated that a relatively poor country can provide educational opportunities widely to the general public through a commitment to free public education from kindergarten to university. The public education system offers comprehensive coverage from early childhood through tertiary and postgraduate education, including vocational schooling. Completion of primary school through 5th grade is near universal, as is literacy among young people. The change in the medium of instruction from English to Sinhalese or Tamil, and nationalization of private schools in 1961 greatly improved access to education. The National Education Commission introduced curriculum reforms over the years, but there was little change in the quality of education and the education system still features an over-loaded curriculum, outdated teaching methods, and a traditional examination system that requires only memorizing information.

Poor funding of education has partly contributed to the low quality and low enrollments at the tertiary level and in vocational education. Historically, Sri Lanka invested 2%–3% of GDP in education, but this declined after 2010 as the government focused more on infrastructure investment during 2010–2014. Recent government policy statements point to a renewed public investment in the sector, recognizing the need to equip young school leavers with the skills required for sustained economic growth. However, spending on the sector remains among the lowest in Asia, which is mostly devoted to teachers' salaries and welfare programs and held back capital spending on education. Despite almost universal enrollments at lower levels of education, net enrollment rates were low (only 43%) at the college level, partly because of a high rate of drop-outs due to poor performance on the national level examinations. Gross tertiary enrollment rates (21%) were below the averages for lower middle-income countries, owing to capacity constraints within the state university system and the absence of a parallel system of private sector involvement. The technical and vocational education and training sector is not able to produce enough qualified, skilled workers to respond to changing labor market needs and a majority of school leavers have no access to skills development programs. Technical and vocational education and training is perceived to have varying standards and offer weak courses that do not cater to market demands.

1.5. Welfare Dimensions of Employment Change

Productivity has risen even though the economy has experienced an increase in informalization. This appears to be counterintuitive because informal workers are less likely to be productive than formal workers. The significant decline in formal employment (conversely, an increase in informal employment) was observed mainly in agriculture and, surprisingly, in industry, as well, albeit at a much lesser degree. Productivity in agriculture had a small decline (by 1%) in 2006–2014 while productivity in the industry sector rose the most (59%) among the three sectors. Only the services sector has seen its formal employment

share rise (to almost 50% in 2014), complemented by a rise in productivity. The unusual concurrence of both rising informal employment and productivity may be partly explained by (1) the relative expansion of formal workers in sectors and subsectors where productivity has also been rising, and (2) the changing skills composition of employment and rising levels of educational attainment of both formal and informal workers across sectors.

Economic gains in recent years have helped reduce working poverty in both the formal and informal sectors. The country also made notable progress in reducing poverty. The incidence of working poverty in Sri Lanka (i.e., the proportion of employed persons who belong to poor households) halved during 2006/07–2012/13 (from 13.8% to 5.4%). Working poverty rates declined in all four sectors: agriculture, industry, construction, and services. With the shift of employment away from agriculture to industry, agriculture's share of the working poor has fallen while industry's share actually increased (from 14% to 18%) in contrast to the quite large decline in working poverty in the service sector (from 31% to 21%).

Even though self-employment and employment in the informal sector have increased, the incidence of working poverty among the self-employed decreased quite sharply, from 11% to 4% during the same period, accompanied by an increase in real labor earnings as the country moves toward a higher level of income. While the incidence of casual labor has risen, its average daily cash wages have increased significantly in real terms in every sector.

With the foregoing observations, this report puts forth a set of recommendations for the Sri Lanka government. A clear national strategy for the labor sector that addresses the expected demographic changes and the needs of the employers, employees, and government is vital. Productive job creation and provision of necessary skills and vocational training for the youth who are engaged in unproductive employment are imperative, and require detailed analysis and proper implementation arrangements. Mobilizing the female workforce is vital, particularly in supporting women leaders who will inspire other females to value and join the workforce. Given rising informality in the context of productivity increase, the government will need to continue investing in social protection and improving workers' welfare.

Chapter 2

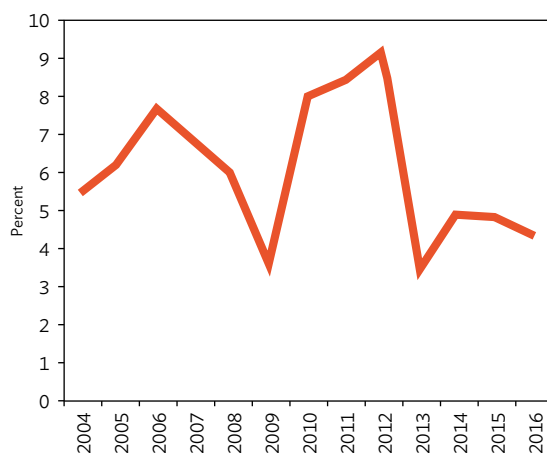
Labor Market Assessment: Overview of Sri Lanka's Demographic and Labor Market

2.1. Overview of Economic Development

The economy has grown at an average rate of 6.4% from 2004 to 2015 (Figure 2.1),² with per capita gross national income increasing from \$2,430 in 2010 to \$3,800 by 2015.³ Postwar reconstruction aided this impressive performance, driven largely by higher

public investment and consumption. Although the country has faced an increasingly difficult external environment, macroeconomic instability, and a significant political transition in the 2 years through 2015, the economic growth outlook remains positive. Growth of real gross domestic product (GDP) was 4.8% and 4.4% in 2015 and 2016, respectively; the slight dip owing to the declining contribution of exports (ADB 2016a).

Figure 2.1 Average Annual GDP Growth Rate 2004–2015



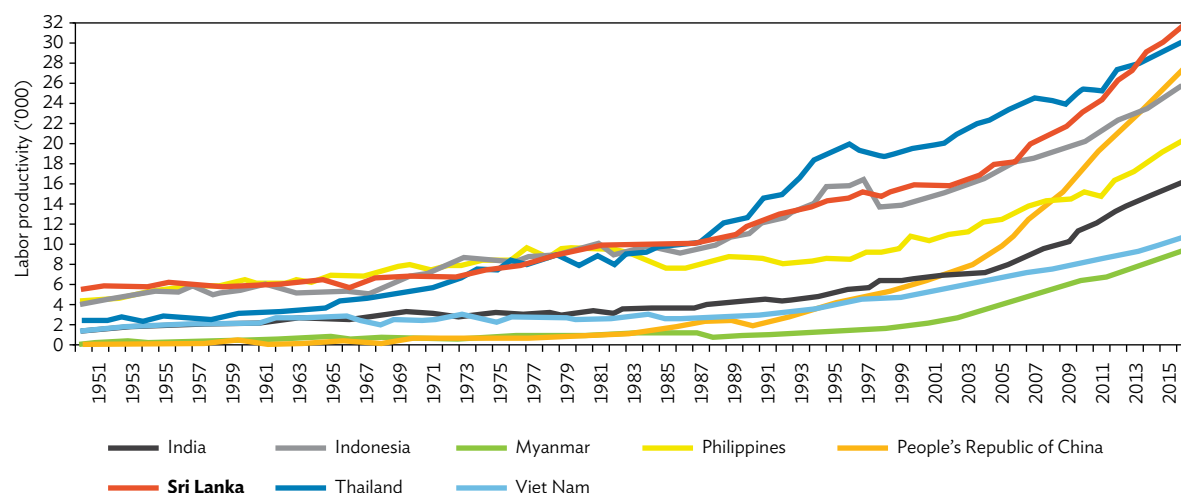
GDP = gross domestic product.
Source: World Bank, WDI (accessed January 2017).

Agriculture accounted for a mere 7.9% of GDP; industry, for 35.5% (of which manufacturing is 15.7%); and services, for 56.6%. With rapid economic growth and extensive coverage of public education and health care programs, the head count poverty ratio declined from 15.2% in 2006/07 to 6.7% in 2012/13. Sri Lanka is likely to attain upper middle-income country status in the next few years.

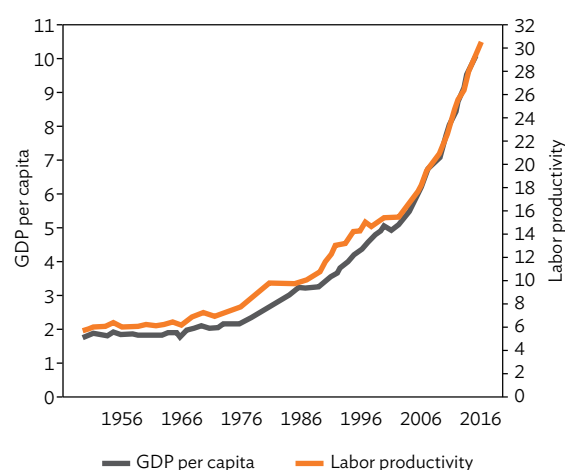
An increase in labor productivity is essential to sustain economic growth and to maintain the economy's competitiveness. Sri Lanka has performed well on labor productivity compared to its Asian peers. Figure 2.2 compares the labor productivity of eight Asian economies. Sri Lanka is positioned at the top of the eight compared countries. Figure 2.3 compares the movement of GDP per capita and labor productivity at 2011 purchasing power parities. The movement

² Growth was also robust, at 6% a year during 2005–2010. Growth since the end of the civil war was driven by the nontradable sectors: construction, transport, domestic trade, banking and insurance, and real estate. This pattern of growth is unlikely to be sustainable for the next 5 years. This estimate is based on rebased gross domestic product values in constant 2010 prices.

³ World Bank, WDI (accessed 20 January 2017).

Figure 2.2: Labor Productivity of Selected Asian Countries, 1950-2016

Sources: Total Economy Database (accessed May 2017) and ADB estimates.

Figure 2.3: GDP per Capita and Labor Productivity, 1956-2016 ('000)

Note: Both labor productivity and per capita GDP are converted at the 2015 prices with updated 2011 purchasing power parities.

Sources: Total Economy Database (accessed May 2017) and ADB estimates.

of GDP per capita and labor productivity are very similar in trend, which implies that the labor market is functioning well from the macroeconomic point of view.

Empowered Sri Lanka, the present government's development policy document, was launched in

January 2017 and envisages reorienting the economy toward a modern and high-value-adding economy that is able to compete effectively in the global market. The policy gives particular attention to creating 1 million jobs, expanding the middle class, and improving workers' living standards. This stated goal of creating employment is to be achieved by encouraging investments in high employment-intensity sectors⁴ on the demand side and by improving skills on the supply side.

These objectives were presented at a critical juncture in the economy's development. The initial boost to the economy took place at the end of the separatist conflict in 2009, driven by construction (mainly in infrastructure development), retail trade, and transport. The initial boost was not sustainable for very long. Economic growth rates, above 8% in 2011 and 2012, declined to below 5% from 2013 on (MOFP 2015). Both internal and external factors influenced this economic downturn (Institute of Policy Studies 2016). Extensive foreign and domestic borrowing to finance infrastructure development projects, heavy losses by state-owned enterprises, increased expenditure on social services, and declining government revenue constrained government finances and eroded macroeconomic stability.

⁴ Employment intensity is "a numerical measure of how employment varies with economic output" (Kapsos 2006: 143).

In this environment, it was difficult to mobilize private sector investment. At the same time, the economy was experiencing repercussions from the global financial crisis that emerged in 2008, mainly in reduced demand for exports. Sri Lanka was slow to recover from the crisis, and the increased attention that the previous government gave to developing infrastructure at the expense of the social sectors will not lead to long-run economic growth. Over time, demands for improving the social sector increased with labor shortages.

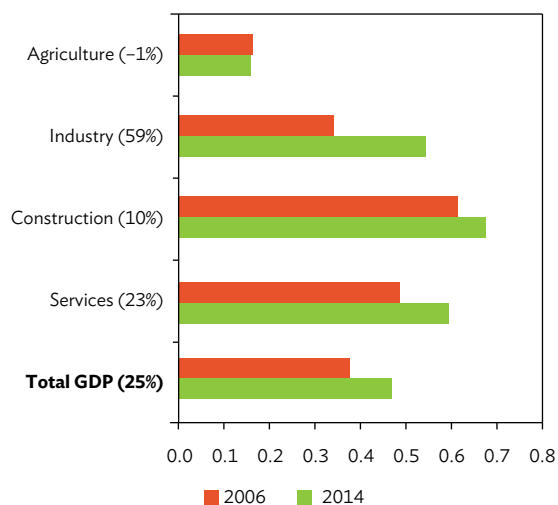
The new government in 2015 has reoriented the focus to activating the private sector and foreign investors in order to drive the economy and create jobs, looking more toward exports and employment abroad. To achieve this end, the government has prioritized improving the business environment and stabilizing the macroeconomy.

An expansion in value-added output across all sectors of the economy brought growth, but expansion in construction and services appear to have been the principal driver. Productivity has risen across industry, construction, and services, and slipped slightly in agriculture (Figure 2.4).

The result has been moderated growth, where industrialization has not taken place at the expense of other sectors. This is evident in Figure 2.5, which, again, shows that industry achieved the greatest gain in value-added shares from 2006 to 2014. In contrast, contributions to GDP by the construction and services sectors have remained stable while agriculture's share has declined marginally.

Labor force projections show that the labor force will increase very gradually until 2028, and then start to decline (Figure 2.6).⁵ This could impede economic growth unless counteracted by more intensive capital investment for improving productivity. Analysis of labor force growth shows two main reasons for the slowdown: (1) decreasing population growth, especially among the working-age population; and (2) declining labor force participation rates (LFPRs).

Figure 2.4: Change in Value Added per Worker, by Sector, 2006 and 2014 (%)

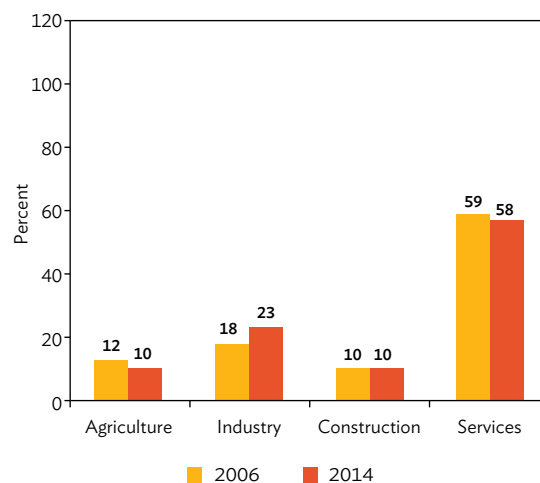


GDP = gross domestic product.

Note: Figures in parentheses are productivity growth rates in the four sectors over the period, where productivity denotes value added per worker in the sector.

Sources: Calculations using microdata from DCS (2007, 2015b) and sectoral GDP data from CBSL (various years).

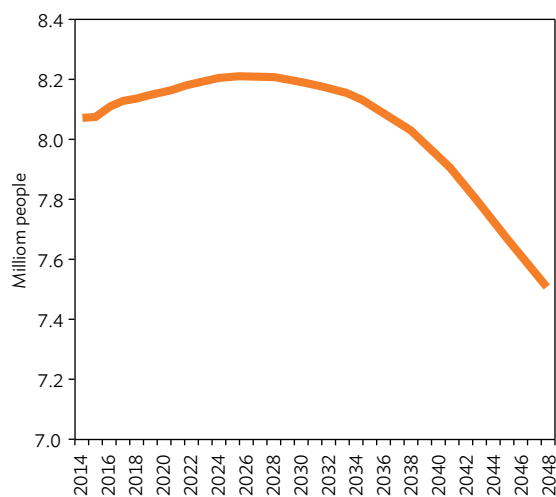
Figure 2.5: Contribution to GDP by Sector, 2006 and 2014



GDP = gross domestic product.

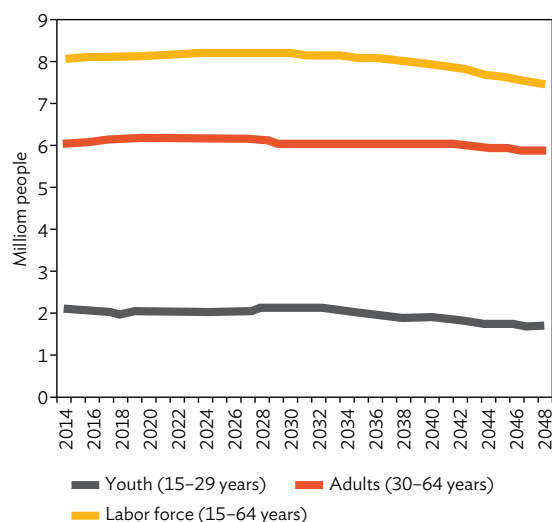
Source: CBSL (2015).

⁵ The projections assume that the labor force participation rate remains unchanged until 2050. This is not an unreasonable assumption, as labor force participation has not changed much in the population over the years, especially among 30–64-year-olds.

Figure 2.6: Labor Force Projections, 2014–2048

Note: Working age is 15 to 64 years.

Sources: Calculations using data from DCS (various years) *Sri Lanka Labour Force Survey: Annual Reports*; and United Nations Population Division (2016).

Figure 2.7: Working-Age Population Projections by Age Category, 2014–2048

Sources: Calculations using data from DCS (various years) *Sri Lanka Labour Force Survey: Annual Reports*, and United Nations Population Division (2016).

2.2. Slowdown in Population Growth

Sri Lanka has entered a demographic transition characterized by low birth and death rates. The working-age population is projected to decline from 2014 to 2048 (Figure 2.7). The net result is an aging of society and a rising age dependency ratio. The size of the elderly population will increase significantly: for every 100 elderly people in 2014 there will be 253 by 2048.

2.3. Labor Force Participation

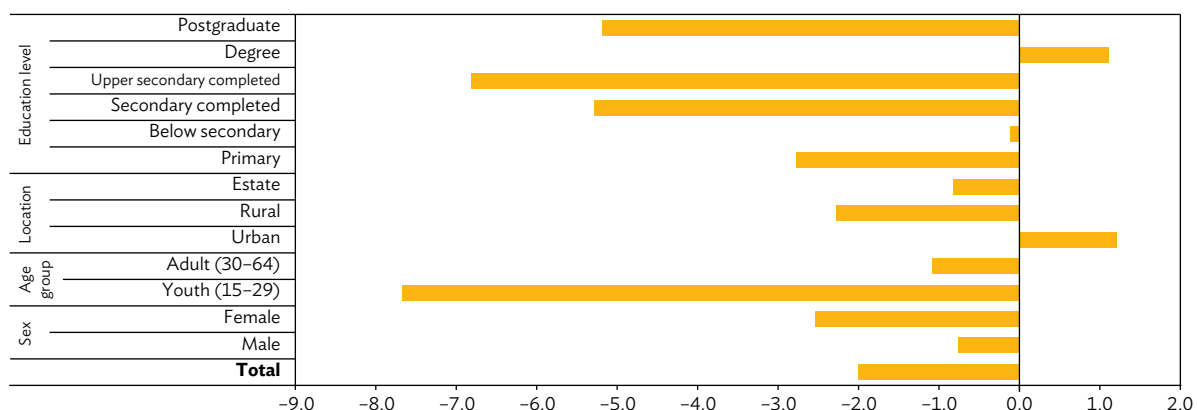
The LFPR declined from 2006 to 2014 among all types of workers, with only a few exceptions (Figure 2.8).⁶ This decline was sharpest among the youth, which may be an effect of increased school attendance. LFPRs among graduates with degrees increased 1 percentage point. The LFPRs of women and people in rural and plantation (estate) areas declined.

Considerable gender and regional disparities are observed in labor force participation and employment (ADB 2016b). The overall LFPR was 53.8% in 2013, but the female LFPR, at 35.6%, was less than half that of males, at 74.9%, as noted earlier. This pattern has remained unchanged for a long time (DCS 2014). As Figure 2.9 shows, the female LFPR in the majority of the districts was less than half the male rates. Anuradhapura, Badulla, Kurunegala, Nuwara Eliya, and Ratnapura districts are the only exceptions. In fact, the female LFPRs in all the districts in the Northern and Eastern provinces, at about 15%–22%, are lower than those in other districts and less than one-third of the male LFPRs.

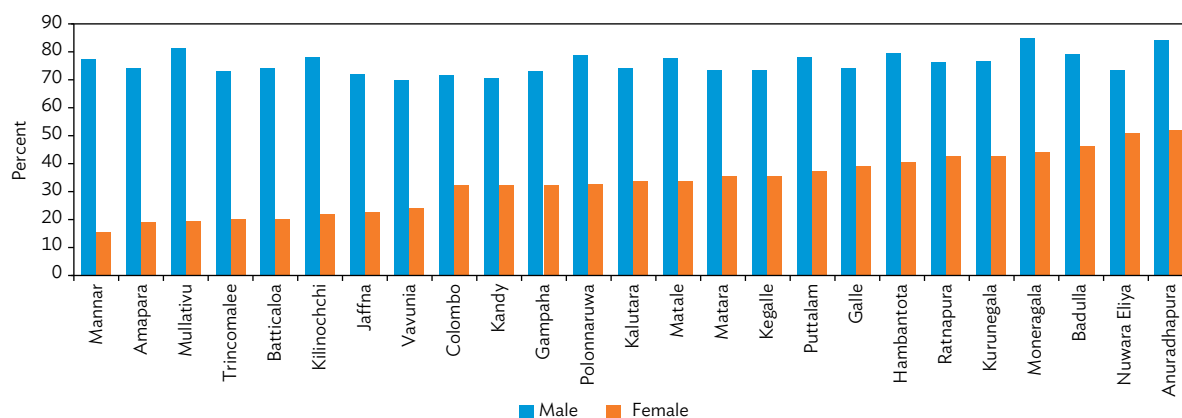
Low LFPRs among women is the main reason for the low overall LFPR, providing substantial room for increasing the supply of labor by increasing the female LFPR. Female LFPRs in more advanced Asian economies such as the Republic of Korea and Singapore are significantly higher than those in Sri Lanka (Figure 2.10). Indeed, Sri Lanka's female LFPR declined from 43.0% in 2006 to 40.4% in 2014.⁷

⁶ The figures quoted here differ from those of the Labour Force Survey, which does not include the Northern and Eastern provinces, and they are for people aged 15 to 64.

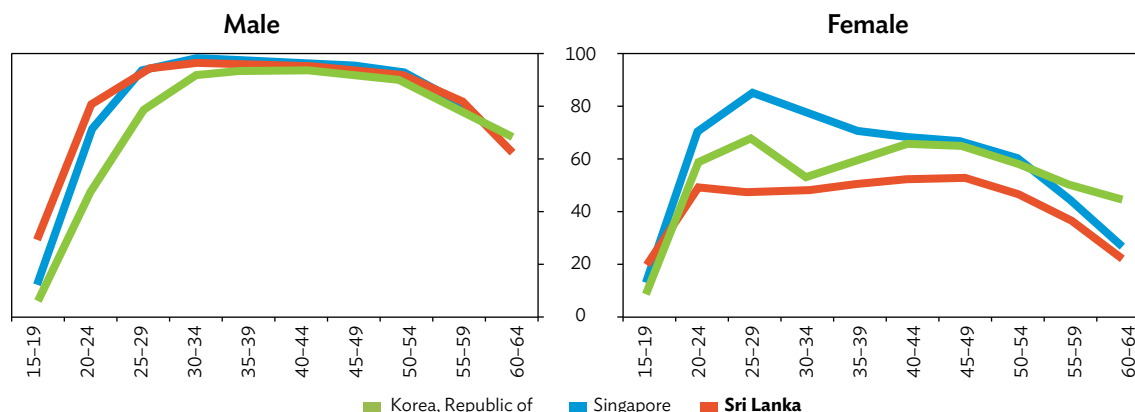
⁷ These rates are for 15–64 year-olds, and thus are not directly comparable to official statistics for the 15 and above population.

Figure 2.8: Difference in Labor Force Participation Rate, 2014 Relative to 2006

Note: Excluding Northern and Eastern provinces. "Estate sector" refers to individuals living on plantations.
 Source: Calculations based on DCS (various years), *Sri Lanka Labour Force Survey* data.

Figure 2.9: Labor Force Participation Rates by Gender and by District, 2013

Note: Districts are ordered by ascending rates of female labor force participation.
 Source: DCS (2014).

Figure 2.10: Labor Force Participation Rate by Age, Country, and Sex (%)

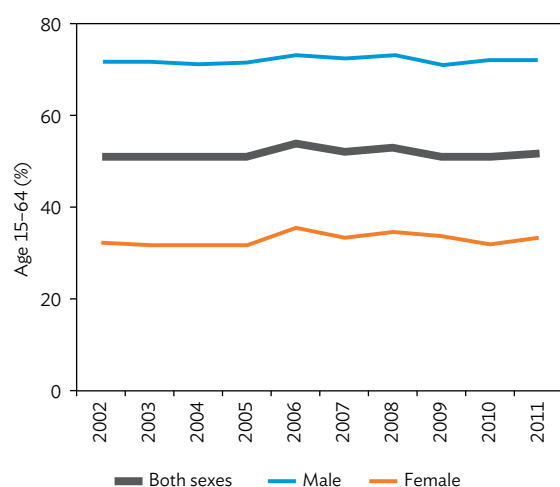
Note: For Sri Lanka, the Northern and Eastern provinces are excluded.
 Sources: Compilation based on DCS (various years) *Sri Lanka Labour Force Survey* data and ILOSTAT data for the Republic of Korea and Singapore.

Female employment has remained lower than that of males over the years (Figure 2.11). Gunatilaka (2013) finds a variety of reasons for low female participation. These include high reservation wages due to high levels of education attainment; high family incomes from remittances or spousal income; cultural factors (e.g., women in some culture groups are less likely than others to participate in the economy); and local labor market characteristics (such as high local unemployment rates) that reduced women's LFPRs. However, high female LFPRs in agricultural employment increased the overall female LFPR.

Policies promoting flexible work arrangements, better jobs, better quality and more affordable childcare facilities, and improved transport services could help increase female LFPRs (Gunatilaka 2013).

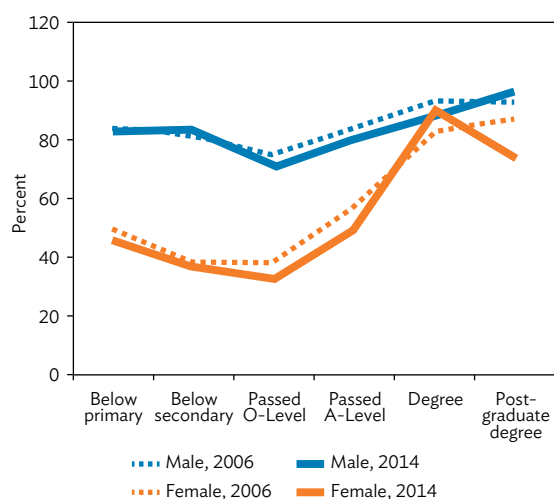
In Figure 2.12, the female LFPR shows a shallow inverse “U” shape tilted toward higher-skilled women, and women with middle-level education (implying skills) show the lowest LFPR. In fact, the LFPR of the

Figure 2.11: Employment-to-Population Ratio by Sex (Age 15 and Above), 2002–2011



Note: The employment-to-population ratio is the ratio of the employed population to the total population of working age.
Source: Based on DCS (various years), Sri Lanka Labour Force Survey: Annual Reports.

Figure 2.12: Labor Force Participation Rate by Gender and Education, 2006 and 2014



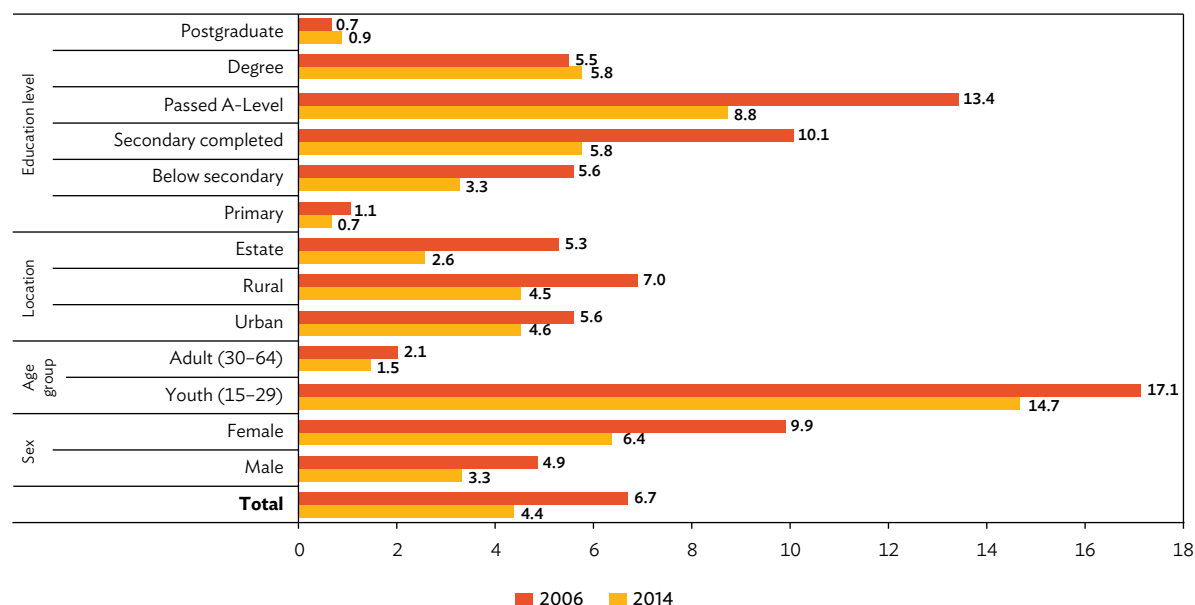
A-Level = Advanced Level, O-Level = Ordinary Level.

Note: Excludes Northern and Eastern provinces.

Source: Compilation based on DCS (various years) Sri Lanka Labour Force Survey data.

highest-skilled females was comparable to that of males. Among degree holders, the LFPR of women surpasses that of men. This could be partly because successive governments have awarded public sector jobs to unemployed graduates from time to time, and women benefitted more than men from an increase in public sector employment during 2006–2014. Low-skilled women exhibit lower LFPRs, which has held over time, because such women tend to stay at home.

Given that labor force growth is decreasing and the labor force will ultimately shrink, it is important that all available workers are employed productively. Indeed, the unemployment rate fell sharply, from 6.7% in 2006 to 4.4% in 2014, and the drop appears in all population groups, possibly indicating a broad-based improvement in the labor market. Although female unemployment is consistently higher than male unemployment, the decline in female unemployment is sharper (Figure 2.13).

Figure 2.13: Unemployment Rate by Age, Sex, Education Level, and Location, 2006 and 2014 (%)

Note: Excludes Northern and Eastern provinces.

Source: Compilation based on DCS (various years) Labour Force Survey data.

2.4. Characteristics of Job Growth

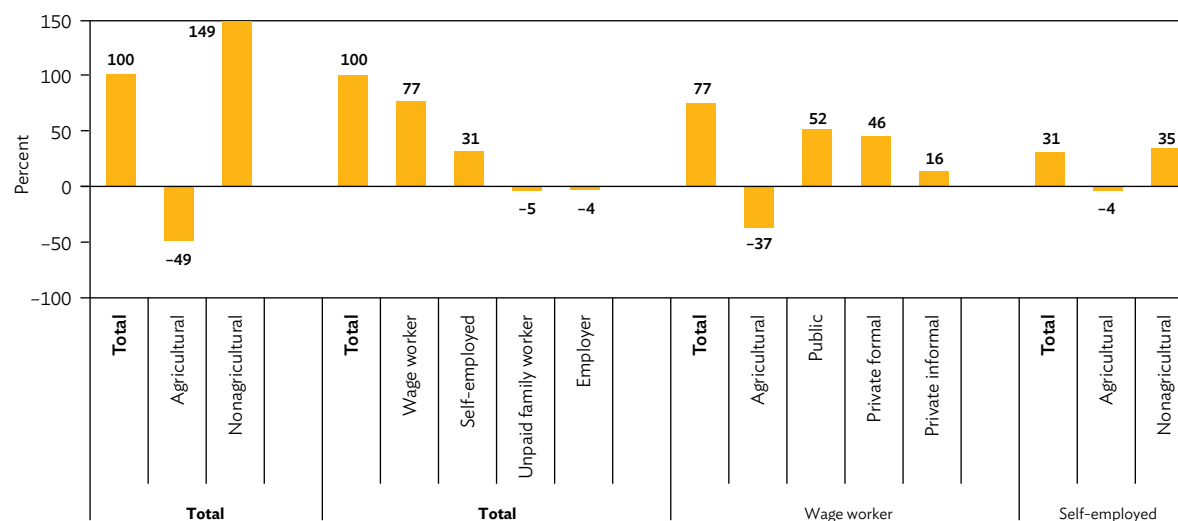
Nonagricultural employment has grown faster than agricultural employment, indicating a shift away from agriculture. Nonagricultural employment increased from 69% of total employment in 2006 to 73% in 2014. Still, more than one-quarter of total employment remains in agriculture, indicating that a large proportion of the population depends on this sector for employment. As such, policies for improving agriculture's productivity would help improve the living standards of people employed in the sector.

The increase in employment has not kept pace with the increase in the working-age population. From 2006 to 2014, total jobs increased by 366,918 (or 5.4%). But the increase in total jobs is below that in the working-age population (at 763,957) and its growth (of 6.4%) over the same period. Employment as a percentage of the population is often used as an indication of the economy's ability to create jobs. This

ratio came down from 57.1% in 2006 to 56.6% in 2014, indicating a marginal deterioration in job creation.

The share of wage workers increased from 56.8% in 2006 to 57.8% in 2014, and the increase is greater for formal sector workers, indicating a marginal increase in better jobs. This increase is mainly explained by the rise in the number of nonagricultural wage workers. In 2014, 28.0% of the total employment was in formal wage employment, with the public and formal private sectors contributing 14.7% and 13.3%, respectively, to total employment. Although the increase in formal sector employment was positive, we will see later that a large percentage of workers were in the informal sector and are considered vulnerable.

The increased share of wage workers was mainly due to the increase in public sector employment (Figure 2.14). Of the total increase in employment, 51.8% (190,087 jobs) were public sector jobs. Formal private sector jobs also grew substantially, while the growth in informal sector jobs was smaller.

Figure 2.14: Contribution to Difference in Job Growth, 2006 to 2014

Note: From 2006 to 2014, the total jobs in Sri Lanka increased by 366,918. The figure shows the contribution of different types of jobs to this growth as a percent of the total increase.

Source: Calculations based on DCS (various years), Sri Lanka Labour Force Survey data.

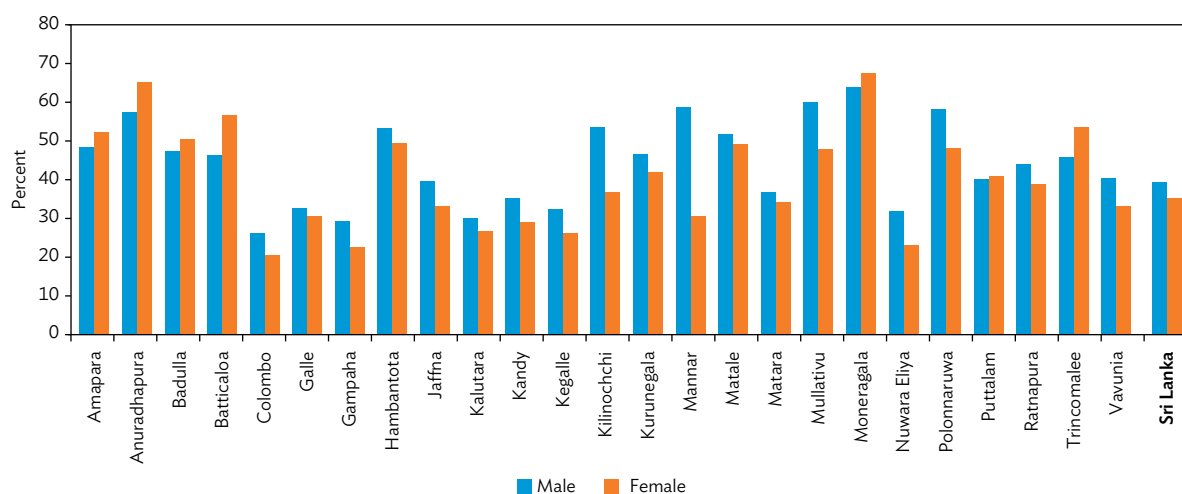
Older and female workers benefited most from this increase in public sector jobs: 70.0% of the jobs were taken by women, and 41.4% is explained by the increase in public sector jobs for 50–59 year-olds. The increases in public sector jobs for 30–39 year-olds (26.3% of the increase) and 40–49 year-olds (22.0%) were also substantial. The increase in public sector employment for 25–39 year-olds is partly explained by the graduate employment placement programs of successive governments.⁸ Finally, the increase in employment was mainly in urban areas (i.e., of the 366,918 new jobs, 88.3% were urban).

The increase in jobs included an increase in vulnerable employment—largely comprising the self-employed or unpaid family workers, the majority of whom are informally employed with few or no social security benefits such as old-age retirement, paid leave, and medical insurance. Statistics show no significant reduction in the share of self-employed and unpaid

family workers in total employment for more than 2 decades: in 2014, close to 40.0% of employment was vulnerable, virtually unchanged from 40.1% in 2006. A high percentage of vulnerable workers indicates lower quality jobs. Although employment trends are moving in the right direction, the changes are happening rather slowly.

The percentage of self-employed and unpaid family workers in the total employment varied significantly across districts (Figure 2.15). Percentages of self-employed and unpaid family workers, both males and females, are lowest in Colombo, Gampaha, Kalutara, and Nuwara Eliya. The percentages were highest in Monaragala (67.9% for females and 64.4% for males), followed by Anuradhapura (65.4% for females and 57.6% for males). Figure 2.9 shows that the LFPRs in Anuradhapura (66.5%) and Monaragala (63.2%) were high, but Figure 2.15 shows that nearly one-third of the jobs were informal.

⁸ Many public sector jobs were created to cater to employment demands from recent graduates. But the government is unlikely to be able to continue to employ such large numbers of graduates. More sustainable employment creation is needed. A recent survey by the National Human Resource Development Council suggests that public sector unemployed graduate recruitments are not strategically placed (NHRDC 2013). About 48% of the survey interviewees were dissatisfied with the way graduates were recruited, mainly because of political interference (43%), unsystematic methods of recruitment (33%), and recruitment not aligned with degree qualification (8%). New recruits' suggestions for improving recruitment also revealed that such recruitments are unlikely to enhance public sector productivity. For example, 30% recommended avoiding political interference in recruitments, 23% recommended recruiting for existing vacancies, 20% recommended recruiting for a position worthy of a graduate, and 16% recommended recruitments should match the subject of the degree.

Figure 2.15: Self-Employed and Unpaid Family Workers in Total Employment, 2012

Source: Based on UNDP (2015).

2.5. Employment Intensity of Growth

The biggest contributor to the average 6.4% GDP growth between 2010 and 2015 was the services sector, closely followed by industry. The increase was accompanied by marginal employment growth, averaging 1.02% annually during 2011–2014 (Table 2.1). Employment growth was highest in the industry sector (4.27%), followed by services (2.69%). Employment in agriculture declined during the same period.

Economic growth was less employment-intensive during 2011–2014, and the employment intensity of growth has declined. For example, a 1% increase in GDP growth was associated with a 1.16% increase in employment during 1996–2002. But during 2011–2014, a 1% increase in growth caused only a 0.16% increase in employment.

This decline in the overall employment elasticity (i.e., the percent increase in employment relative to a 1% increase in growth) is mainly due to the decline in the employment elasticity in the agriculture sector. During 2011–2014, employment in agriculture declined despite an annual average output growth of 4.2%. This indicates that, during 2011–2014, agriculture's productivity rose but its employment contracted. Employment intensity

Table 2.1: Employment, Output Growth, and Elasticity in Sri Lanka, 1996–2014

Growth, Value Added, and Employment Elasticity	1996–2002	2002–2010	2011–2014
Agriculture			
Annual employment growth (%)	2.31	0.81	-3.69
Annual value-added growth (%)	1.90	5.00	4.20
Employment elasticity	1.23	0.17	-0.9
Industry			
Annual employment growth (%)	2.31	3.16	4.27
Annual value-added growth (%)	4.50	8.00	6.50
Employment elasticity	0.52	0.38	0.66
Services			
Annual employment growth (%)	5.02	1.02	2.69
Annual value-added growth (%)	5.40	8.00	7.30
Employment elasticity	0.94	0.13	0.37
All Sectors			
Annual employment growth (%)	5.02	1.02	1.02
Annual value-added growth (%)	4.30	8.00	6.50
Employment elasticity	1.16	0.17	0.16

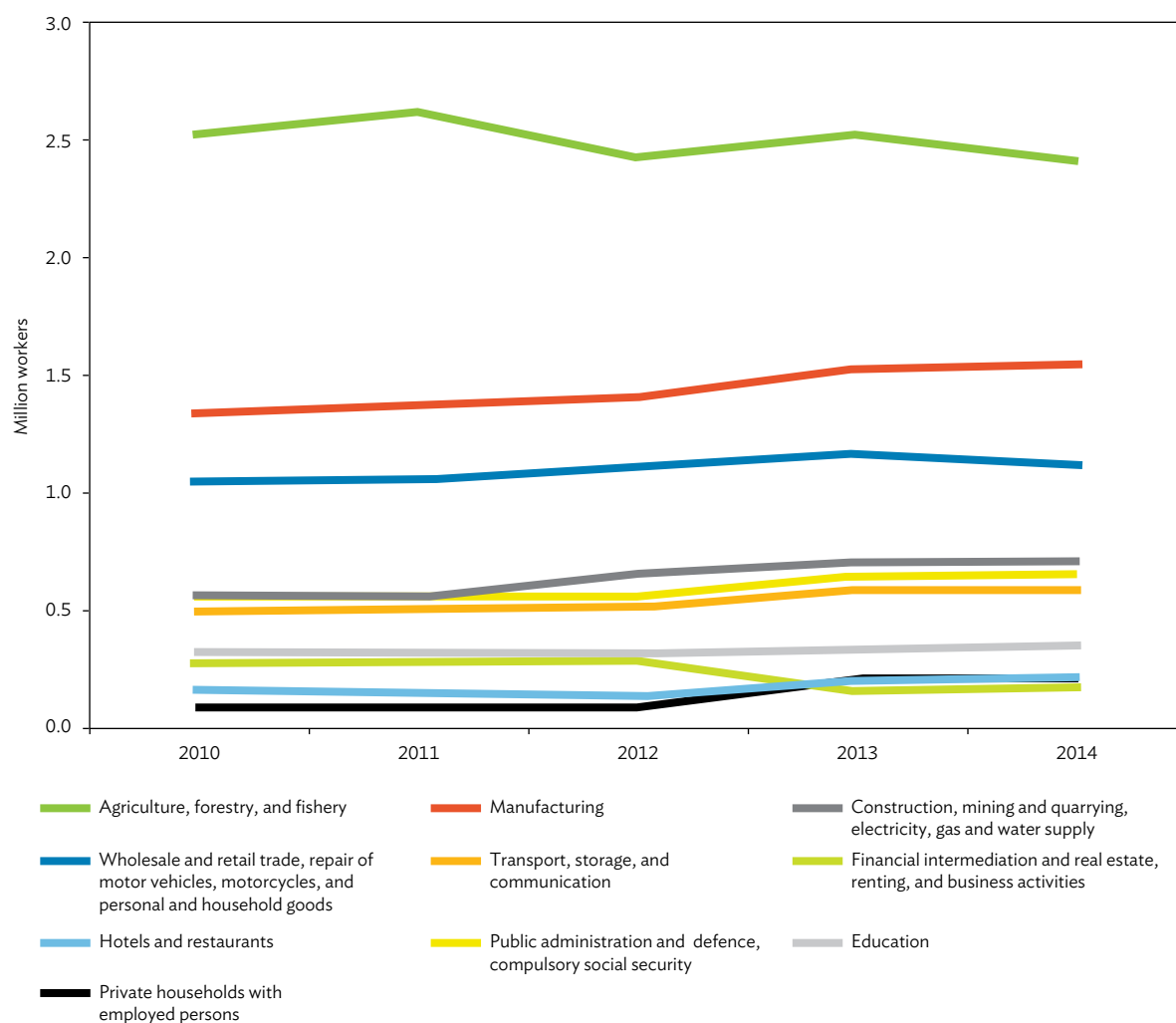
Sources: Data in the first two columns are from Chandrasiri (2013); figures in the last column are author's calculations based on MOFP (2015).

in the services and manufacturing sectors increased; in both, employment elasticities were less than 1 but greater than 0, indicating that the two sectors had experienced employment growth accompanied by productivity growth. The statistics suggest that investments in industry and services could result in output growth that would also lead to increased employment.

Due to changes to data availability and categorization, it is impossible to examine directly how growth has contributed to employment generation in subsectors

of the economy. However, a cursory look at the available data indicates that growth did generate jobs in certain sectors. The subsectors that contributed to GDP growth have also contributed to employment creation (Figure 2.16). For example, the number of people employed clearly increased in manufacturing; construction; mining and quarrying; and electricity, gas, and water supply. Employment also increased marginally in wholesale and retail trade; repair of motor vehicles, motorcycles, and personal and household goods; and transport, storage, and communication subsectors. An exception was financial intermediation

Figure 2.16: Trends in Employment by Selected Industry, 2010–2014



Notes: Data for 2013 and 2014 are not directly comparable to data from prior years for two reasons. (1) Data for 2010 to 2012 exclude the Northern Province, while data for 2013 and 2014 are for all provinces. (2) The 2010 to 2012 data use International Standard Industry Classification (ISIC) from the third revision to the fourth revision in 2013. The graph approximately matches the ISIC fourth revision to ISIC third revision for 2013 and 2014. Sources: DCS (various years), *Sri Lanka Labour Force Survey: Annual Reports*.

and real estate, renting, and business activities, where employment declined although the subsectors contributed significantly to growth.

2.6. Wage Decomposition

Monthly real earnings by wage employees have increased for all employee categories (Figure 2.17). The gaps between the male and female average monthly earnings and female and youth monthly earnings have increased, albeit marginally.

From 2006 to 2011, the greatest increase in monthly real earnings was in “other services, unspecified,” followed by agriculture and mining (Figure 2.18). The lowest increase in monthly earnings was seen in community and family-oriented services. These trends in real wages somewhat explain the employment trends by industry. The highest job growth was also observed for “other services, unspecified,” while the largest decline in employment was seen in “community and family-oriented services.” Employment in agriculture

declined despite an increase in real wages in this sector, as noted. The data suggest that the earnings growth in the services sector is taking place mainly in small-scale, unspecified service industries.

The monthly and the hourly real earnings both increased for all workers, with the earning trends favoring the less-skilled workers (Figures 2.19 and 2.20). That the monthly earnings of less-skilled workers increased more than their hourly earnings suggests that they are also working longer hours. Conversely, the hours typically worked by the higher skilled workers were reduced. For example, from 2006 to 2014, the time worked decreased by 0.30 hours for people with postgraduate degrees and by 0.13 hours among those with undergraduate degrees.

Figure 2.17: Monthly Real Earnings of Wage Employees, 2006–2014

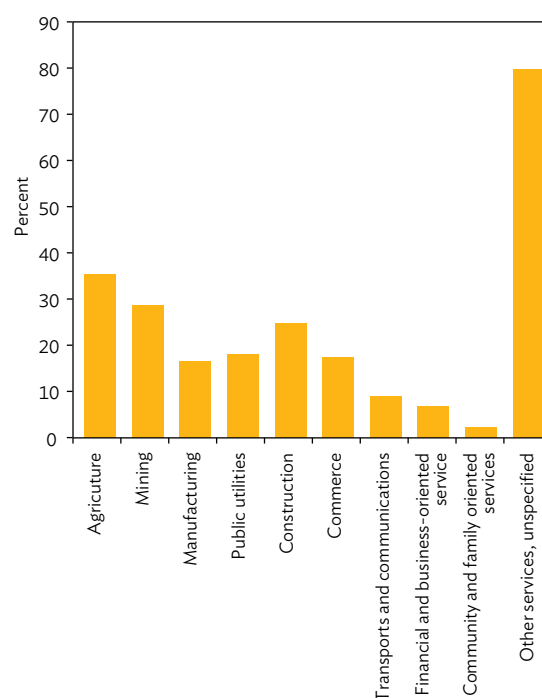


SLRs = Sri Lanka rupees.

Note: Wages are given in 2006/07 rupees.

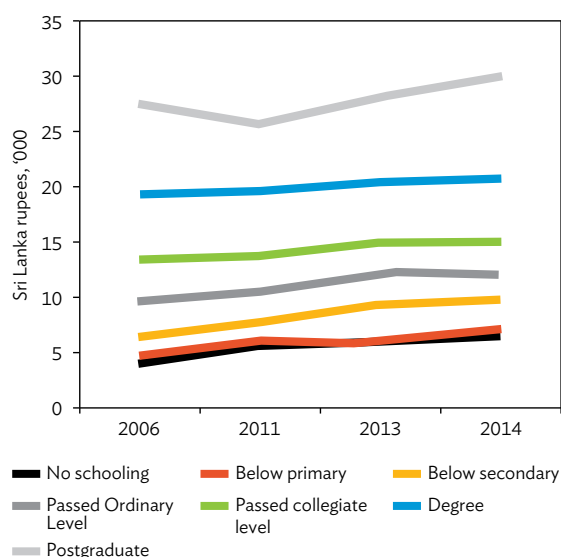
Source: DCS (various years), *Sri Lanka Labour Force Survey: Annual Reports*.

Figure 2.18: Monthly Real Earnings Growth by Industry, 2006 to 2011



Note: Wages are given in 2006/07 rupees. Industrial codes used by DCS changed in 2013, therefore, trends from 2006 to 2014 cannot be calculated.

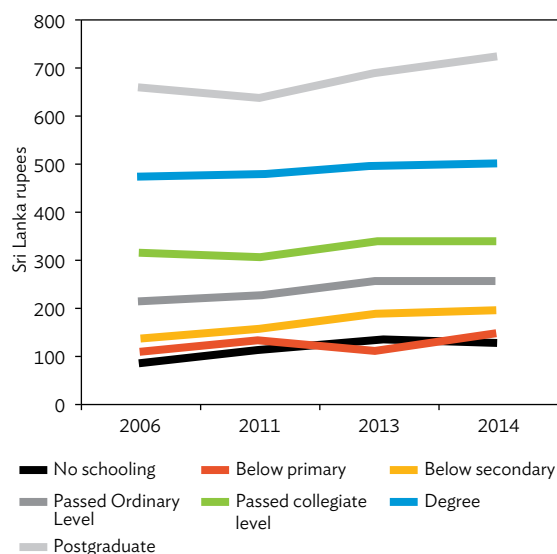
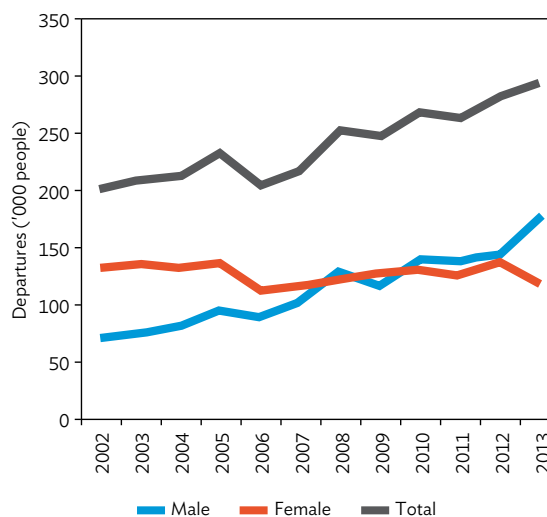
Source: Authors' calculations based on DCS (various years), *Sri Lanka Labour Force Survey: Annual Reports*.

Figure 2.19: Change in Monthly Real Wages, 2006–2014

2.7. Labor Migration

While the growth of Sri Lanka's labor force is slowing, the country is also losing many workers to foreign employment. In 2013, close to 300,000 people went abroad for jobs, and the number has increased steadily since 2002 (Figure 2.21). Census data for 2012 show that 6.5% of people 18 and above were temporarily residing abroad (Arunatilake 2016).

The government's foreign employment policies need to account for the country's labor market requirements as well as its foreign exchange requirements. Despite a slowdown in the growth of the labor force, successive governments have promoted foreign employment, as foreign remittances are important for earning foreign exchange. To cater to the domestic needs of the labor market, the country will need to make employment more attractive within the country. This includes improving compensation and the working environment. Further, to reduce reliance on worker remittances, the avenues for earning foreign exchange will need to be diversified.

Figure 2.20: Change in Hourly Real Wages by Level of Education, 2006–2014**Figure 2.21: Departures for Foreign Employment by Gender, 2002–2013**

Chapter 3

Aging and Labor Market Impacts

3.1. Introduction

Sri Lanka's population is already aging rapidly and began doing so early in its development trajectory, unlike in many developing countries. As noted previously, by 2015, 7.9% of the population was 65 or older, which was a higher share than the South Asia regional average of 5.4% and the lower-middle income average of 5.3%.⁹

Like the People's Republic of China and Viet Nam, where 9.6% and 6.8%, respectively, of the populations are 65 or older, Sri Lanka faces the risk of aging before becoming rich. Its population is predicted to age fast in the next few decades, and labor force growth will slow or even contract as early as 2030. The projection is that by 2030, nearly one-quarter of the population will be 65 or older, reaching the Organisation for Economic Co-operation and Development (OECD) average.

Two demographic dynamics drive aging: longevity and fertility decline. In Sri Lanka, adults are surviving longer while fewer babies and youths are added to the population. These factors will eventually lead to a declining support ratio (the size of the labor force as a share of the adult population) and a rising dependency ratio (the number of people 65 or older plus the

number of children below 15, divided by the number of employed people).

The decline in the working population as a share of the total will have a tremendous impact on the macroeconomic structure in consumption and investment, affecting long-term productivity growth. This will have significant impact on the economy on various fronts, including decreasing demographically determined tax contributions and increasing the tax burden of social welfare, a decline in the relative size of the economically active population, a changing dynamic in the migration of the labor force, and changes in the structure of demand for goods due to a shift in the age structure (Börsch-Supan 2003).

While aging has a broad impact on economic development, this chapter will focus on how the population aging will affect the country's labor markets. For an aging society with a decreasing labor force to sustain consumption levels, productivity growth has to be enhanced, driven by increased physical capital intensity and strengthened human capital. It is important for the Government of Sri Lanka to anticipate the potential impact of the demographic transition on economic development and develop strategic plans to avoid a potentially harsh transition.

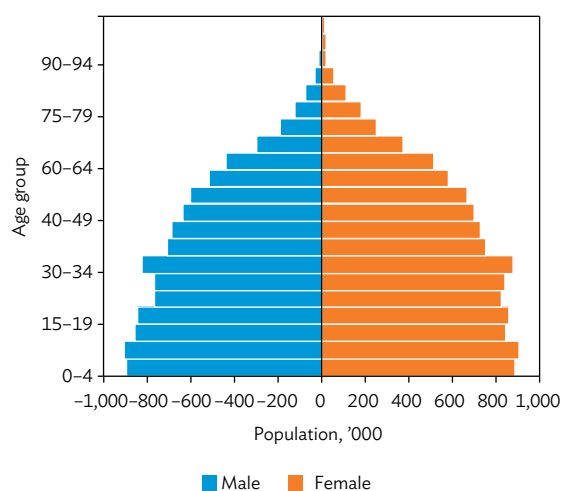
⁹ World Bank, WDI (accessed 29 December 2016).

3.2. Demographic Trends and Projections

Using birth and death rates from the latest population census (2012), Figure 3.1 presents the estimated demographic pyramid for 2015. The chart is not particularly pyramidal, suggesting decreased growth in the younger populations. The 30–34 age group is almost as large as the 15–19 age group. The 20–29 group is slightly smaller, likely due to out-migration of workers that was not captured by the census. The 0–9 group (the lowest two bars on the figure) is slightly larger, which may be the result of a baby boom associated with the end of the civil war. In addition, the figure shows good gender balance at birth.

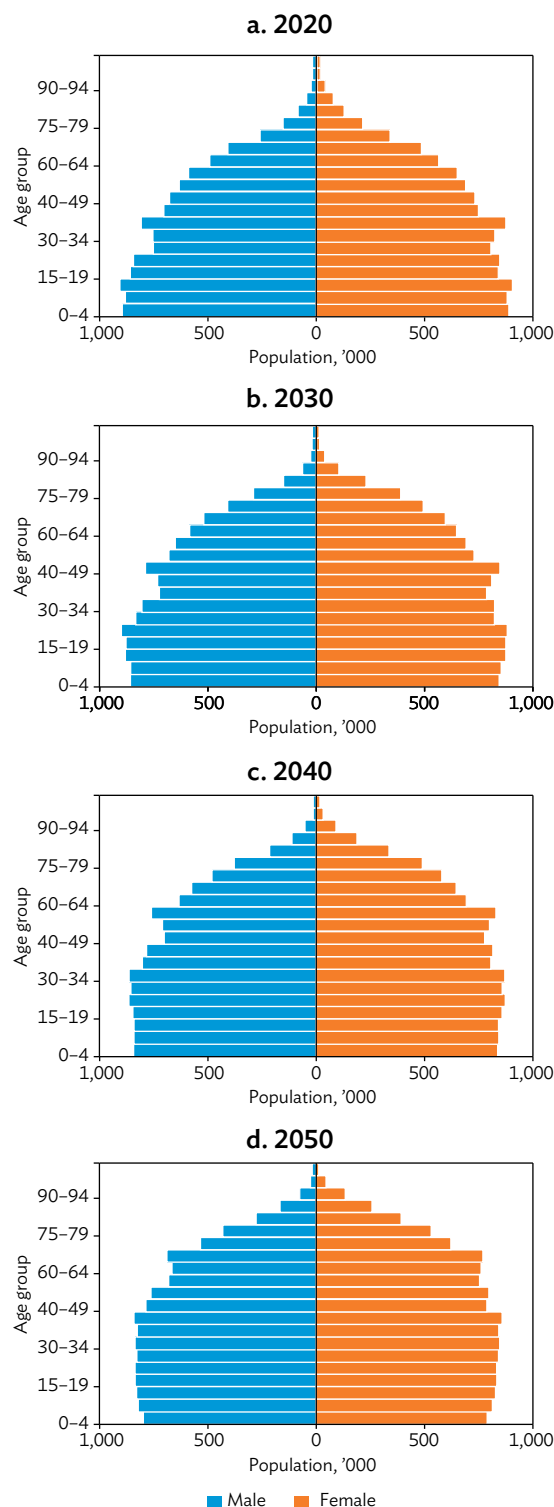
Overall, the population pyramid shows that Sri Lanka still has a gender-balanced, relatively young population, but its growth has stagnated for the last 30–35 years. From now on, the pyramid will gradually square out, as forecast in Figure 3.2. In 2015, the fraction of people aged 60 or above was 12.4%.¹⁰ The forecast puts the fraction of the elderly population at 20.3% by 2035, which implies a 64% increase. The older group in the elderly population (age 70 or more) is predicted to grow even more rapidly, from 4.8% in 2015 to 10.4% in 2035. Not only are such people less

Figure 3.1: Sri Lanka Demographic Pyramid in 2015



Source: Estimates based on DSC (2015a) census data for 2012.

Figure 3.2: Forecast (midline) Demographic Pyramids for 2020, 2030, 2040, 2050

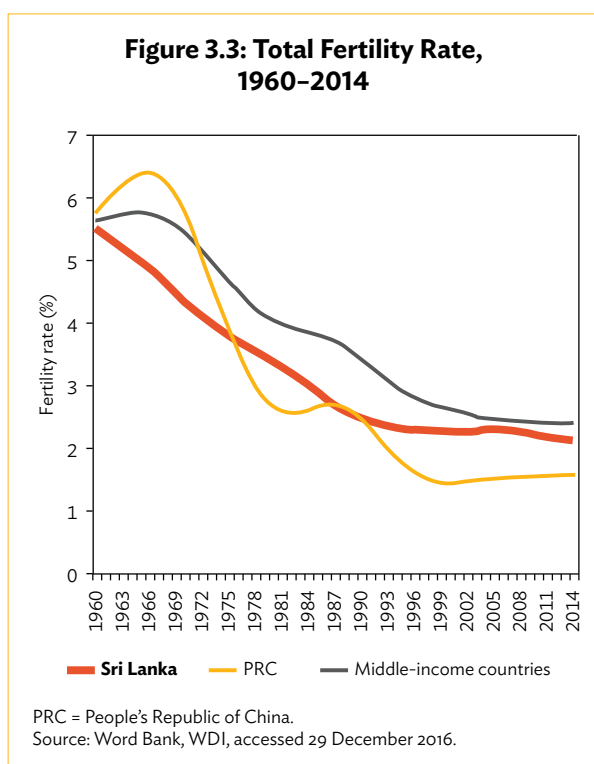


Source: Calculations based on DCS (2015a).

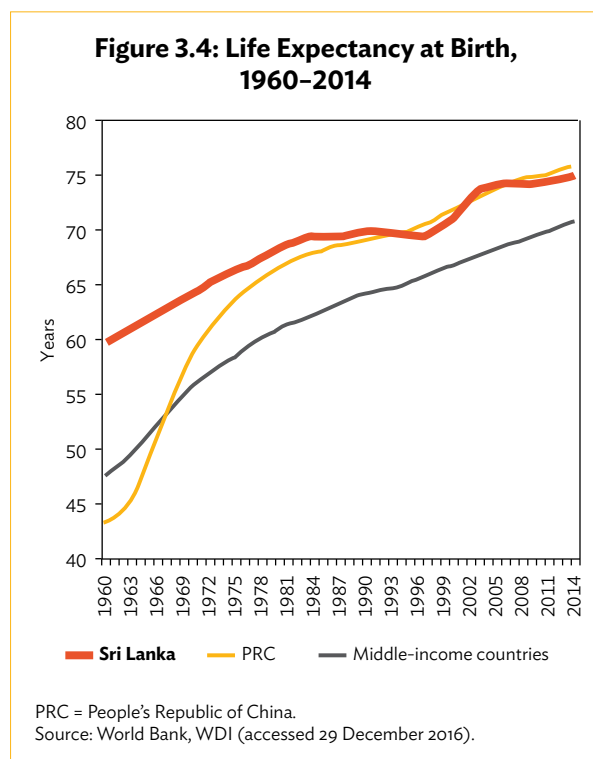
¹⁰ For economic issues, age 60, the current retirement age, is a more relevant cutoff for Sri Lanka than the 65 used in defining “elderly”.

likely to participate in the labor market, but they will also require more social and economic resources for pension and health care support.

The demographic shift in Sri Lanka began as early as the 1960s. The early adoption of universal health care and education in the post-colonial period led to an extraordinarily healthy population at a relatively low income level. Total fertility declined due to later marital age, sterilization, and traditional methods of pregnancy prevention, including extended breast-feeding (*International Family Planning Perspective and Digest* 1978). For the middle-income countries as a whole, significant declines in fertility did not begin until the 1970s (Figure 3.3). By 1992, Sri Lanka's total fertility was already at the replacement level (roughly 2.1 children per woman).¹¹

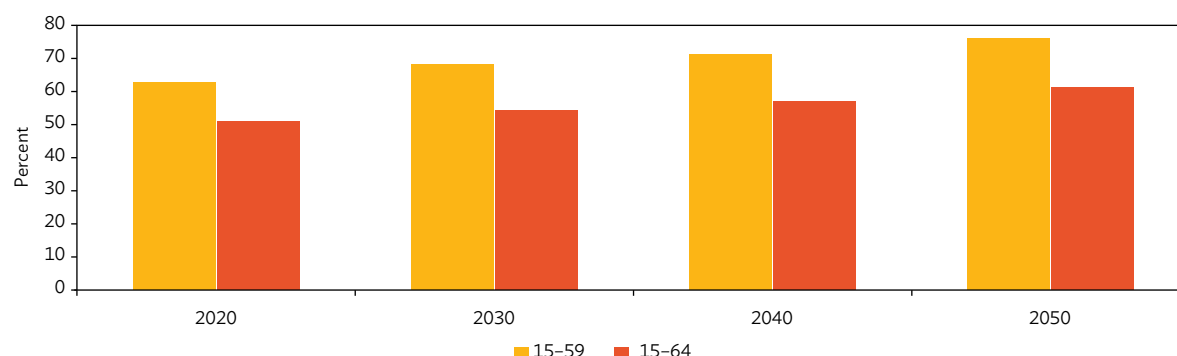


¹¹ "Replacement level fertility" is the total fertility rate—the average number of children born per woman—at which a population exactly replaces itself from one generation to the next, without migration. This rate is roughly 2.1 children per woman for most countries, although it may vary modestly with mortality rates (Searchinger et al. 2013).



Similarly, in the 1960s Sri Lanka had already achieved higher life expectancy than the average middle-income country. By 2014, life expectancy at birth was approaching 75 years (Figure 3.4).

These early demographic trends allowed the country to reap the benefits of a low dependency ratio and large young population with free access to education and relatively high literacy (Box 3.1). The dependency ratio reached a minimum of 48.0% in 2005 (ILO 2016a), a huge change from 87.5% in 1960 and 67.4% in 1980. The dependency ratio has risen again since 2005, and reached 51.2% by 2015. Using 60 as the retirement age, the dependency ratio is predicted to rise to 60% in 2020 and 75% by 2050 (Figure 3.5). If the retirement age were raised to 65, the increase in the dependency ratio would be less—from 51% in 2020 to 61% in 2050.

Figure 3.5: Forecast Dependency Ratio at Retirement Ages 60 and 65, 2020–2050

Source: Author's calculations based on DCS (various years), HIES.

Box 3.1: The Demographic Dividend in Sri Lanka

Sri Lanka has reaped its “demographic dividend” that had been generated by the early stages of a demographic transition. The demographic transition is often characterized in five stages.

- In the initial stage, a high birth rate and high death rate accompany overall slow population growth.
- In the second stage, the population expands rapidly as death rates fall because public health, nutrition, and medicine improve.
- In the third stage, social factors and individual preferences often result in a falling fertility rate. The society has fewer children to support, and the elderly population is still small. With a low dependency ratio, there are more potential workers relative to the total population, making it easier to increase income per capita.
- In the fourth stage, birth and death rates are both low, and the population is stable. Countries in this stage tend to have stronger economies, higher education levels, better healthcare, a higher proportion of working women, and a lower fertility rate of about two children per woman.
- In the final stage, fertility rates have fallen significantly below the replacement level (2.1 children per woman) and the elderly population is greater than the younger population.

Some econometric studies find large growth impacts from the demographic dividend, significantly larger than could be accounted for simply by the abundant supply of labor. Researchers have also hypothesized that other advantages of a younger labor force exist, possibly including greater sectoral mobility and greater willingness to adapt new technologies.

Sources: Authors; Bloom, Canning, and Malaney (2000); Bloom and Finlay (2009); Population Education (accessed 15 December 2016).

The demographic transition will eventually progress to a low-growth stationary or even declining stage, with a persistently low fertility rate and longer life expectancy. At that time, society will need to support a large elderly population with a smaller working-age population.

Although Sri Lanka's population older than 65 in 2015, at 7.9%,¹² was below the 20% average of European countries, it was already much higher than the South Asia regional average of 5.4%, and the lower-middle income country average of 5.3%.

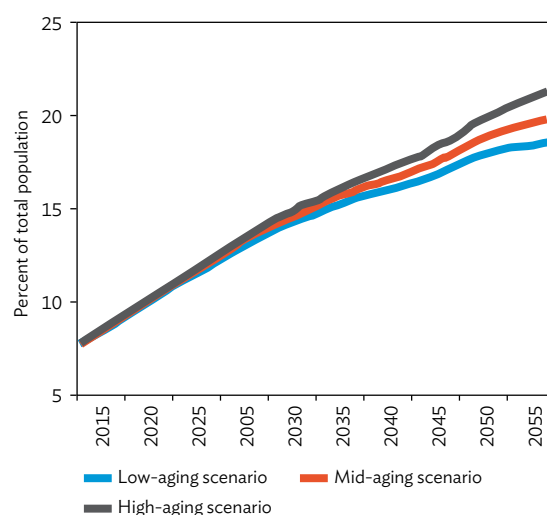
¹² World Bank, WDI (accessed 29 December 2016)

Sri Lanka's life expectancy had exceeded the average of middle-income countries in the 1960s, owing primarily to its universal health care and good education. The country has an extensive, high-quality public health care system that, by some measures, actually performs better than the private hospital system (Rannan-Eliya et al. 2015). Use of health services is on par with that of the OECD countries. These factors explain Sri Lanka's excellent health outcomes despite relatively low spending on health, which in 2014 amounted to 2.4% of gross domestic product (GDP).¹³ It is not surprising, therefore, that the average life expectancy at birth reached a population average of 74.8 years in 2014—72.6 for males and 78.9 for females (WHO 2016b). This is almost 5 years longer than the average life expectancy for lower-middle income countries. Sri Lanka's life expectancy is projected to reach 80.9¹⁴ years by 2050, surpassing the average OECD level of 79 years (OECD 2011).¹⁵

Figure 3.6 shows three forecast scenarios for the aging of Sri Lanka's population: low, middle, and high. The scenarios reflect different assumptions concerning some key demographic variables, including total fertility rates (the theoretical fertility of an average women surviving throughout her reproductive life), male and female life expectancies, and net immigration rates. For the three forecasts, the different input values are picked based on their impact on population aging: for example, the high-aging forecast assumes both a lower value for fertility and more rapid increases in life expectancy, while the low-aging forecast assumes the opposite. The three scenarios are not designed to bracket the possible rates of population growth, as is often the practice in demographic forecasts, but rather to bracket the potential impacts of population aging.

In all three scenarios, the elderly population grows dramatically. In the middle-aging scenario, the fraction of elderly in the population will have doubled by 2038 relative to the 2015 baseline. Using the official retirement age of 60 and above would yield higher figures. De Silva (2012) forecast that the elderly population would reach 25% by 2014, implying that one in every four people will be in the elderly group.

Figure 3.6: Forecast of the Elderly Population in Sri Lanka, 2015–2055 (age 65 and above)



Source: Calculations based on DCS (various years).

3.3. Labor Force Participation and Unemployment of the Elderly

The retirement age of 60 applies to government workers and, historically, government workers were able to collect pensions at age 55 for men and 50 for women (World Bank 2012). Table 3.1 shows that most of the decline in labor force participation occurs around the official government retirement age of 60 for both males and females. More women than men withdraw from the labor market after age 60, perhaps owing to the cultural expectation that women will care for grandchildren and the elderly at home.

Table 3.1: Labor Force Participation Trends for Older Individuals, 1992–2014 (%)

Year	Male		Female	
	50–59	60+	50–59	60+
1992	80.1	41.1	25.8	8.4
2006	87.6	43.3	42.1	13.0
2012	86.1	46.6	39.5	13.8
2014	88.3	46.1	40.7	15.3

Source: DCS (various years), Sri Lanka Labour Force Survey: Annual Reports.

¹³ World Bank, WDI (accessed 29 December 2016).

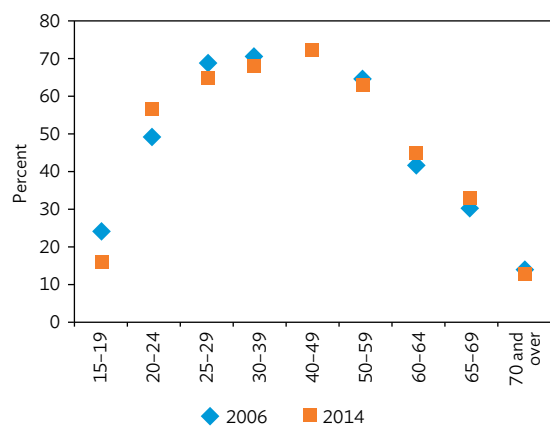
¹⁴ Knoema. Population Projections and Estimates, 1960–2050. <https://knoema.com/WBPEP2014/population-estimates-and-projections-1960-2050?country=1001770-sri-lanka> (accessed December 2016).

¹⁵ OECD (2011) <https://www.oecd.org/berlin/47570143.pdf> (accessed December 2016).

There is a slight increase in the labor force participation rates (LFPRs) of older people—for example the proportion of 60–64 and 65–70 year-olds participating in the labor market has increased by 3.3 and 2.6 percentage points, respectively (Figure 3.7). However, international comparisons show that the LFPRs for Sri Lanka's older people lag behind those of other countries in the region such as Bangladesh, India, Pakistan, and Thailand (Vodopivec and Arunatilake 2011).

A vast majority of older workers are engaged in the informal sector, work long hours, and are paid less than younger workers (Vodopivec and Arunatilake 2011). The working conditions of the elderly reflect the labor market duality that characterizes most developing countries—that is, government and formal private sector workers generally stop working before they reach 60 due to mandatory retirement regulations, whereas casual and self-employed workers are forced to continue working until a very old age (or death) due to poverty, or to stop working primarily because of poor health.

Figure 3.7: Trends in Labor Force Participation Rates by Age Group, 2006 and 2014



Note: Excludes the Northern and Eastern provinces.
Source: Authors' calculations based on DCS (various years). *Sri Lanka Labour Force Survey data*.

3.4. Pension and Social Welfare Services for the Elderly

3.4.1. Pensions and Other Retirement Savings Programs

A relatively small share of Sri Lanka's population is covered by pension. A World Bank (2008) study estimated the coverage at 10%–15%, and a later Asian Development Bank (2011) study estimated it at 10%. The Public Service Pension Scheme, the largest and most important pension program, covers a large majority of the 1.37 million public sector employees. As of November 2016, about 578,000 people were receiving some form of government pension benefits (Department of Pensions 2016). This included programs for survivors (widows and orphans), military pensions, teachers' pensions, and local government pensions.

The Public Service Pension Scheme has an 85% replacement rate, based on the last few years of employment, and the benefits are not taxable (ADB 2011). The benefits, however, are not indexed to inflation. The scheme is noncontributory and is financed out of general government revenues. Expenditures on public sector pensioners amount to about 1.5% of GDP and account for about 7.3% of total government expenditures.

Large private employers are eligible to participate in the Employees' Provident Fund (EPF), which, while not a traditional pension program, is still important for many retirees.¹⁶ The EPF requires contributions of 20% of the employee's wages, with 8% from the worker and 12% from the employer.¹⁷ Employers may also choose smaller programs instead of the EPF. The Central Bank of Sri Lanka manages the EPF funds. By the end of 2015, the pension program had 2.6 million active accounts, with total assets of nearly 15% of GDP, making it the largest retirement-related program in Sri Lanka.¹⁸

¹⁶ Because the EPF is not a pension program in the usual sense, those enrolled in it are not counted in the estimates of pension coverage above.

¹⁷ The employers' contribution was likely intended to be a benefit for workers, but it is a standard result from public economics that the effect of such policies, the incidence, is independent of the nominal split in the funding.

¹⁸ Calculated based on asset figures from CBSL, What is EPF? <http://www.epf.lk/whatisepf.php> (October 2016).

The EPF benefits come as a single payment upon retirement; workers are eligible to collect their payment at age 55 (men) and 50 (women). The EPF guarantees that its plan participants have a substantial stock of assets at retirement; thus, it plays an important role in encouraging savings for retirement and preventing poverty among the elderly. However, the program ties retirement benefits to formal employment and does not address the needs of most of the poorest and vulnerable informal sector workers.

Sri Lanka has established several contributory pension schemes for the informal sector. However, the results have largely been discouraging and the government has not made plans to replace the nonfunctional schemes with viable schemes that would provide significant benefits.

The largest of these is the farmers' pension scheme that was started in 1987 and administered by the Agricultural and Agrarian Insurance Board. The fund was intended to be voluntary, fully self-financed by individual contributions, which limited its success. The uptake rate was low: one estimate put the enrollment rate at 36% in 2009 (World Bank 2009a). Administration of the fund was also problematic. While there was no official inflation indexation, there were repeated *ad hoc* increases in payments and forgiveness of defaults—contributors' failures to make scheduled payments—but with caps on contributions. This generated a very substantial implicit unfunded liability and inevitably led to the collapse of the scheme, with the burden passed to the Treasury. In 2011, the Treasury ceased payments, ending the plan. In 2014 a new farmers' pension plan was announced, this time with explicit government contributions; however, the benefit levels are very low.

3.4.2. Health and Long-Term Care Services

Sri Lanka's public health care system is extensive and of high quality, far better than that in many middle- and lower-income countries. Indeed Sri Lanka's public hospital system performs better than the

private hospitals in some measures. Sri Lanka also has an extensive private system used primarily by high-income Sri Lankans able and willing to pay out of pocket.

In Sri Lanka, utilization of health services is on par with that in OECD countries. For example, physician visits average 6–7 per year, and hospital admissions about 1 in 4 years. Not surprisingly, such high levels of health service provision are a major explanation for the country's excellent health outcome indicators. The outcomes have been achieved despite relatively low levels of spending on health; government spending on health amounted to about 2.0% of GDP in 2014 (World Bank 2016a) with total health care expenditures of 3.5% of GDP (WHO 2016a).

The government also actively supports elderly care, led by the National Secretariat for Elders. The Ministry of Health is fully aware of the health issues relevant to the elderly and has formulated and implemented many policies in preparation for the increasing elderly population. As in most countries in Asia, a strong cultural and religious imperative compels adult children to care for elderly parents (Balasuriya 2011). Women are usually the primary caregivers, while often both men and women contribute financially to care for older parents.

The vast majority of elderly people in Sri Lanka live with family—only about 6% live alone¹⁹—and the availability of residential long-term care is very limited. Only about 1% of elderly people live in residential facilities (ESCAP 2016). There is some public provision of residential care facilities for the elderly; the National Secretariat for Elders has reported about 300 “elder homes,” but their total capacity is only about 10,000 people (ESCAP 2016). As such, they account for a tiny portion of elderly care. Waiting lists are long for the existing elder homes, indicating substantial unmet demand (Fazlulhaq 2011). A few private residential long-term care facilities exist, but the cost of using them means that only a few people can afford them. So far, government policy has focused on community-based care and support for family caregivers.

¹⁹ The 6% figure comes from two sources; the first is a comprehensive 2006 survey of older people (World Bank 2008). Unfortunately, no comparable nationally-representative survey has been conducted since then. However, a survey of 1,125 older persons in Nuwara Eliya district, conducted in 2012, found exactly the same figure, providing at least some evidence that typical living arrangements for older people have been relatively stable (Burnet Institute and the Fred Hollows Foundation 2013).

3.5. Aging and Macroeconomic Fiscal Impacts

Population aging will induce profound macroeconomic structural changes on labor, goods and services, and capital markets and has significant implications for public policy. A smaller share of the population will be paying taxes, while government outlays for social welfare will increase. The gap between gross and disposable earnings may widen, which has fiscal impacts for social policy, including pensions and health care.

The decline in the proportion of the economically active population needs to be offset either by higher capital intensity or higher labor productivity to avoid undermining domestic production. More investment in education and training is needed to speed up human capital formation. The shift in age structure will also change the structure of demand for goods. Finally, a substantial increase in labor mobility is needed to accommodate these structural changes.

3.5.1. Effects on Economic Growth

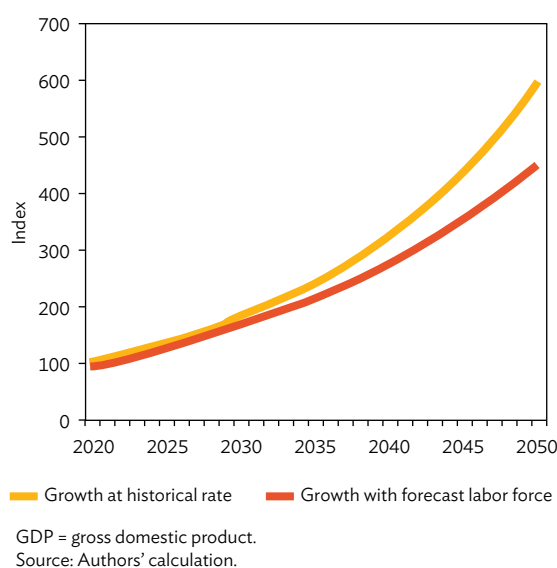
An abundant supply of labor and a low dependency ratio benefit economic development. A younger labor force, as noted earlier, is associated with greater sectoral mobility and greater willingness to adopt new technologies.²⁰ Yet, even if technology and capital accumulation grow, the aging of society challenges structural transition and economic development by reducing the labor supply and through a potentially less dynamic workforce.

A simple “growth accounting” approach is used to estimate the economic impact of slower growth of the working-age population.²¹ The model assumes that (1) technological progress and capital accumulation

continue at the same pace as in recent years,²² and (2) LFPRs remain constant. The estimates are calibrated to baseline economic and labor force growth between 2006 and 2014.²³

To start, the average GDP growth during 2006–2014 and the fraction of this growth due to labor force growth were calculated at 6.1% and 1.2%, respectively.²⁴ Then, two GDP series were constructed (Figure 3.8): a hypothetical series assuming labor force growth at historical rates and another using the new demographic forecasts that have been discussed above.²⁵ The top line simply projects a continuation of the GDP growth rate of 2006–2014. The lower line reflects growth under projected slower growth in the working-age population. Without other changes, population aging will lead to significantly lower economic growth, and this calculation accounts only for the most direct effects of a smaller working-age population.

Figure 3.8: Projected GDP Growth with Historical versus Forecast Labor Force Growth Rate, 2020–2050



²⁰ See Bloom, Canning and Malaney (2000), and Bloom and Finlay (2009).

²¹ The original growth accounting framework is from Solow (1957).

²² These assumptions are unlikely to be correct, but are convenient for isolating the effect of the slower growth of the working-age population. A lower rate of labor force growth may lead to less implementation of new technology. And slower output growth is likely to feed back as lower rates of capital accumulation. As such, the figures presented in this section serve as a lower bound on the growth effects of slower working-age population growth.

²³ This period is chosen based on the availability of Department of Census and Statistics' Labour Force Surveys.

²⁴ The calculation for the portion attributable to growth input assumes a labor share of 0.66, uses the standard Solow assumptions of constant returns to scale in the aggregate production function, and assumes that factors are paid their marginal products.

²⁵ LFPRs are applied by age and sex categories to be consistent with the changing demographic composition of the population that is embodied in the demographic forecasts.

As in Table 3.2, an alternative representation of the results is possible. It uses the forecast GDP level in 2020 as the benchmark, and shows, for example, that GDP would be more than 7% lower in 2030, simply on account of the slower growth of the working-age population.

Table 3.2: Forecast of GDP Level with 2006–2014 Working Age Population Growth Rate (%)

Year	GDP Relative To Historical Growth Rate
2020	100.0
2025	96.3
2030	92.7
2035	88.6
2040	84.7
2045	80.3
2050	76.1

GDP = gross domestic product.
Source: DCS (2015b).

3.5.2. Fiscal Impacts

The dependency ratio is projected to increase during the next few decades. As previously noted, with a higher percentage of elderly people, the demographically determined tax contribution will decrease and the tax burden caused by social welfare payments will increase. These conditions will put moderate fiscal pressures on public finance and the growth of public income.

Pension. Because public sector employment has not been growing rapidly in recent years, pension expenditure is likely to fall (in real terms) in the near future, and not increase rapidly. Pension benefit levels may also be modified to adapt to fiscal constraints caused by the noncontributory nature of the program, with beneficiaries not obliged to pay into the fund. However, because public sector wages are comparatively low, a reduction in retirement benefits may be met with substantial resistance.

The government's commitment to the new farmers' pension scheme (section 3.4.1) is relatively modest

and therefore is not expected to have a significant fiscal impact. The government's administrative cost for the EPF is likewise modest.

Health Care. Several trends will put pressure on public expenditure for health care, including population aging, the epidemiological transition, changes in population practices for accessing health care, and medical inflation. The combined result could have a significant impact on the fiscal burden for health care, especially given universal free access to it. Changes in factors other than aging that influence health care costs may ultimately outweigh the effect of population aging on costs.

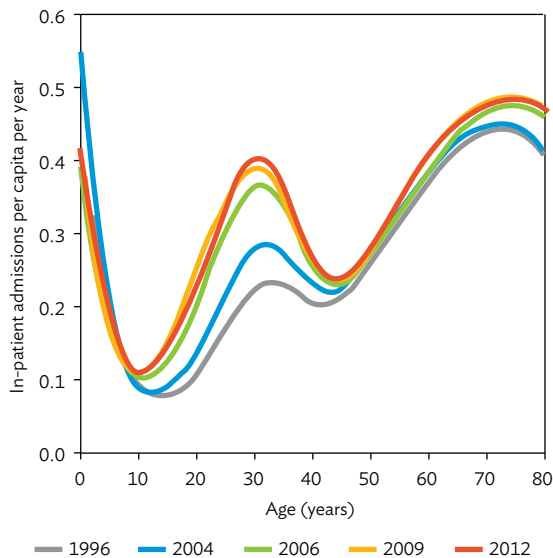
The epidemiological transition from communicable diseases to chronic noncommunicable diseases, which generally require ongoing and sometimes expensive treatment, will increase use of health care.²⁶

The history of health care in Sri Lanka and the experience in other countries indicate that people will want, and will use, more health care as incomes increase, even as the population becomes healthier. Public sector productivity changes and private sector price inflation may substantially outweigh the cost impacts of aging *per se*. Marsh and McLennan (2016) estimate that only 30% of the incremental costs of health care for the elderly are associated with demographic change.²⁷

Specific analysis for Sri Lanka also indicates that population aging is not the most important factor driving health care costs. Figure 3.9 plots in-patient admissions for women by age from 1996 to 2012. In-patient admissions have increased steadily and significantly across all age groups. Indeed, older women are more likely to be admitted to hospital, but so too are many women of prime reproductive age. The data indicate that aging only explains one-third of the increase in the hospital admissions of women in the last 2 decades.

²⁶ See WHO (2011) for a discussion of the "epidemiological transition."

²⁷ The forecast model used in this study is not described, so it is impossible to evaluate the reasonableness of the forecast, but at least it indicates that other analysts find that demography is not the most important driver of rising health care costs.

Figure 3.9: In-Patient Admission of Women by Age, 1996–2012

Note: Some crossing of the lines indicates non uniform increase, but this may be due to sampling error, as some of the groups examined are relatively small.

Source: Analysis of DCS (various years), Household Income and Expenditure Survey.

Global and Sri Lankan experience indicates that aging will put upward pressure on health spending, and ultimately this additional spending will have to come from the government, as the elderly are less able to finance their own health care. Access to the public health care system is essential especially for the elderly poor.

The current system does well by international standards in managing cost inflation and achieves high rates of productivity growth in the public sector. Maintaining a strong public delivery component and public spending at about 50% of total health spending may be sufficient to cope with most aging pressures until 2030, but an overall increase in spending, possibly about 0.5% of GDP, will be needed.

Long-Term Care. It is difficult to forecast the demand for and fiscal burden of long-term care. Other than simple demographics and morbidity rates, factors including social and cultural preferences are important determinants. Although traditional Asian

cultures emphasize family care, the experience of Japan, Singapore, and other high-income East Asian countries proves that formal long-term care is often indispensable due to factors such as small family size and increased migration. In particular, the people most likely to need formal long-term care are the oldest ones. They are less likely to have income or assets, creating a need for collective financing schemes. OECD countries typically spend 2%–4% of GDP on long-term care, a very big expense relative to current government revenue. Sri Lanka currently has no formal policy to expand residential long-term care; however, given projections of the need for such care in the long term, policy and planning for expanding residential long-term care should be developed soon.

In summary, given the existing policies, the fiscal effects of population aging will be modest, with the largest effect accounted for by increasing health care costs. Long-term care will likely become a major cost factor, although several years may pass before its impact becomes significant. Only a small minority of older people have pensions and many of the rest have little or no savings. As Sri Lanka becomes richer, demand for government help to guarantee the well-being of the elderly will almost certainly be strong. Naturally, it would be better to start planning soon, and invest the time needed to design an equitable and fiscally sustainable system.

3.6. Policies to Maximize Human Resources for and Minimize the Fiscal Burden of Aging

As identified in the previous section, the two most important effects that population aging will have on economic growth are (1) the slower growth of the working-age population, and (2) the increase in the dependency ratio. Additional sources of labor are needed to mitigate or reverse the decline in labor force growth. Three avenues for increasing the volume of labor available for economic activity are

- (1) increasing labor force participation;
- (2) decreasing unemployment; and
- (3) Increasing net immigration, including the return of migrant workers from abroad.

One way to increase the volume of labor is to increase female labor force participation by removing barriers to women's participation and boosting factors that enable women to work; indeed, female labor is quantitatively the largest possible source of additional labor. Raising the female LFPR to the average level observed in high-income countries would increase the overall labor force by 17%.²⁸ This would be adequate to replace decades of labor force reductions brought by population aging, although so long as women remain the principle caregivers for elderly family members, the aging of the population will provide a barrier to female labor force participation.

Several approaches are known to encourage women's participation in the labor force. Sri Lankan law does not provide full legal equality for women in the work place and could consider providing it, as research has found that legal guarantees for women's equality in the work place increases female participation in the labor force (Gonzales et al. 2015). Another is to create policies that encourage employers to hire workers part-time or to allow flexible time employment. Another is the promotion of nontraditional roles for women that can help to break down barriers between gendered economic spheres. General programs to encourage gender equality will also be helpful. Encouraging employers to provide childcare facilities and subsidies may make it easier for women to work.

It may also be possible to increase older workers' LFPR, although older people comprise a much smaller potential source of labor than women. The government could first consider increasing retirement ages. The civil services retirement age was recently increased to 60 and the possibility of increasing it further could be considered, given that life expectancies continue to increase. Any increase could be phased in to prevent a dramatic decrease in government hiring of younger people.²⁹

Retirement ages outside of the public sector are not defined by law, and there is evidence that men are already working well into old age, especially in the informal sector. The most obvious policy that helps to influence retirement decisions is the eligibility to

receive payments from the EPF—which is currently age 50 for women and 55 for men. Extending this age would likely encourage people to continue working later into life, contribute to national savings, and potentially reduce poverty among the elderly by leading to greater asset accumulation.

Transformation of the economy may also increase opportunities for older workers. For example, increased mechanization of agriculture would reduce the dependence of agricultural work on physical strength and health. Similarly, expanding services and information technology can produce more jobs that are less physically intensive. More generally, policies that encourage a transition to the more modern sectors can extend the working lives of older workers. And better health care for older workers will allow them to work later into life; good progress is already being made in this regard, with the Ministry of Health's focus on health care for older people.

Reducing youth unemployment will also increase the pool of labor, but because the overall unemployment rate is relatively low, this would not be likely to add more than 1% of productive labor. Improving the quality of general education to provide the knowledge and skills required in the workplace, as well as better matching the skills provided with the demands of employers, are important for enhancing youth employability. Improving labor market information systems can also lead to a more rapid school-to-work transition.

A final important source of labor could be the repatriation of workers from overseas. In 2014, just over 300,000 official departures for foreign employment were recorded (Sri Lanka Bureau of Foreign Employment 2015). The total number of overseas workers is not accurately known, but is likely over 1 million, which is more than 11% of the current total labor force. This is potentially a very large pool of workers for the domestic economy. Further, some employers believe that the large sums of money transferred home by overseas workers serve to reduce the labor supply of family members that stay in Sri Lanka, compounding the labor drain of overseas workers.

²⁸ This calculation is based on figures from DCS (2015b).

²⁹ Historically, unemployment among young university graduates has created significant political pressure to provide government jobs. A long period of limited hiring of young graduates could create a backlash against policies to extend retirement ages.

The skills mismatch in the domestic labor market is represented by the issues of overseas workers. While the overseas workers could supplement the labor force if they returned home, this may not necessarily be good for the economy as a whole. The primary reason that people leave to work abroad is to earn higher wages than they could at home. Thus, bringing many overseas workers home might increase GDP growth, because there is more labor available for production domestically, but would reduce the gross national income because local wages may be unable to replace overseas remittances.

A possible strategy is for the Government of Sri Lanka to encourage foreign investments in high employment intensity sectors and highly skilled sectors to keep high-productivity jobs in the country. If wages in Sri Lanka increase, overseas workers may consider returning home. Wages and employment opportunities in Sri Lanka could increase due to labor shortages resulting from economic transformation and the demographic transition. Thus, good economic policies for growth and modernization could encourage overseas workers to return home and thereby increase the labor supply.

Chapter 4

Bridging Skills for Employment in Sri Lanka

4.1. Introduction

To develop a knowledge-based economy, Sri Lanka will need to make its human capital globally competitive in critical thinking and innovation. For decades, Sri Lanka has been a leading example of a relatively poor country that has provided many educational opportunities to the general public. Since 1945, Sri Lanka has been committed to providing free public education from kindergarten through university.³⁰ Completion of primary school through 5th grade is almost universal, as is literacy among young people. Further, with the aim of improving access to general education, successive governments have implemented welfare programs, including the distribution of free textbooks, scholarships for disadvantaged students, free uniforms, and subsidized transport facilities.

Sri Lanka has successfully provided basic education to almost all children; however, the quality and relevance of the education system must be improved to equip workers with the evolving skills demanded in a more globalized world. There are substantial mismatches between the demand for and supply of workers, especially between higher education and high-skilled workers (Dundar et al. 2014). Tertiary education has expanded, in keeping with the demand and with the

growth of higher education in countries at a similar income level. But not all graduates have the skills the private sector most desires. This mismatch is also evident in technical and vocational education and training (TVET), as employers often do not accept the qualifications of TVET graduates (ADB 2014).

To meet the emerging needs of Sri Lanka's labor market and strengthen economic activity, the education system needs substantial modernization to equip workers to think and act creatively, work industriously and productively, and be able to innovate and adapt to available technologies to strengthen economic activities.

The public finance constraints and limited private sector participation in education present a major challenge to addressing the need to align the education sector with the changing needs of a dynamic labor market. Attempts to improve the quality and relevance of general education have been made by introducing market-oriented subjects and a more practical-oriented curriculum; however, implementation issues, including financial constraints and lack of resources, have obstructed delivery of the expected outcomes. The implementation issues could have been caused by issues in coordination especially with provincial

³⁰ Although the preschools run by the provincial councils are free of charge, kindergarten education offered by private sector institutions are not entirely free.

authorities, problems in flow of financial resources to the provincial, zone, and school levels from the center; improper planning; issues in allocation of responsibilities to the provincial and zone levels; and inadequate focus on teacher development. Furthermore, the attempts to improve quality by introducing market-oriented and practical-oriented subjects had been hampered by the highly examination-driven education system and lack of attention to improve the curriculum in consultation with industries and other relevant stakeholders.

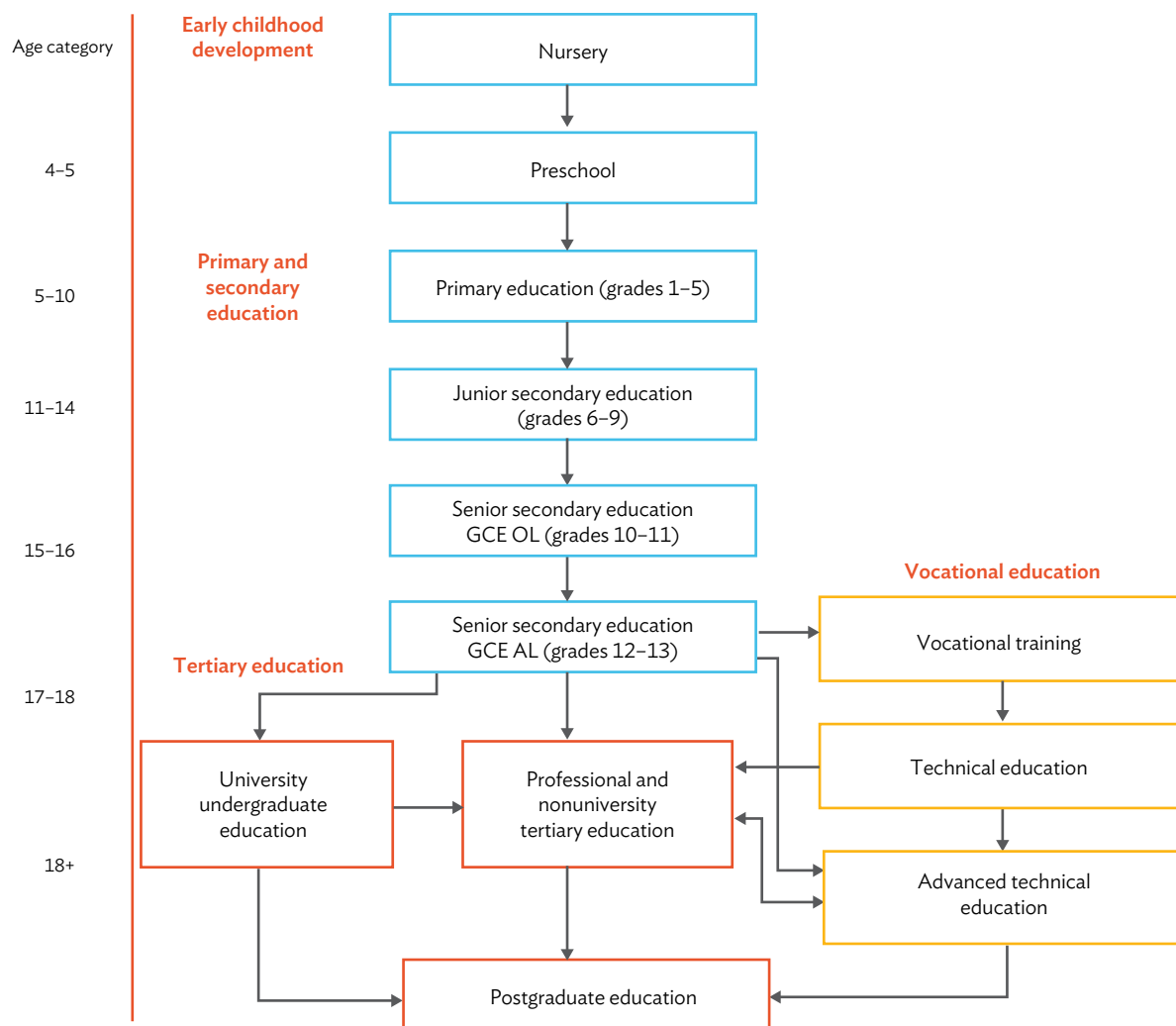
This chapter analyzes the education system and policies; examines the challenges, with particular

attention to TVET and higher education; and identifies high priority areas for action.

4.2. Education System, Structure, and Governance

The public education system offers comprehensive coverage from early childhood to tertiary and postgraduate education, spanning 13 years from about ages 4–18 (Figure 4.1). Access to tertiary education is subject to performance on the national level examinations and level of school completion.

Figure 4.1: Organization Structure of the Education System in Sri Lanka



GCE AL = General Certificate of Education Advanced Level, GCE OL = General Certificate of Education Ordinary Level.
Source: MOE (2013b).

Early childhood care and development concerns the physical, mental, social, and emotional development of a child from infancy (ages 0–3) through preschool (ages 4–5). The Ministry of Health is responsible for implementing early childhood care and development programs for the infant stage. Children aged 4–5 attend preschools run by government agencies, Buddhist religious schools, urban councils, and municipal councils (*pradeshiya sabhas*), or by private sector organizations. All early childhood care and development centers are regulated by provincial councils, which are responsible for quality assurance, teacher training, school maintenance, and distribution of learning and teaching material.

Primary education sets the foundation for academic development. It incorporates activity-based, child-centered learning to achieve basic competencies in language, mathematics, environment-related activities, and religion. The primary stage ends with the grade 5 scholarship examination, which awards students bursaries and placement in secondary schools.

The junior secondary level incorporates a subject-based curriculum. School-based assessment is introduced in grade 6, where each student's work is assessed through written and practical testing procedures. Students who pass grade 9 proceed to “ordinary” level (O Level) classes in grades 10 and 11. The curriculum consists of six compulsory and three optional subjects. At the end of grade 11, students take the General Certificate of Education O Level examination, which tests them on the subject matter they have covered. Passing the O Level qualifies the student for the Advanced Level (A Level) course.

At the A Level courses (grades 12 and 13), students select three subjects in one of the “streams”—science, arts, commerce, and technology. Standardized A Level results and the district quota system determine entry into the state university system. Students who opt not to take the A Level exam join vocational training or enter the labor market.

4.2.1. Higher Education

Higher education includes university (state and private) and higher technical education. Institutes offering higher education come under the Ministry of Higher Education and Highways (MOHEH). Universities and postgraduate institutes are managed by the University Grants Commission (UGC), and institutes offering higher national diploma certificates (advanced technical institutes) come under the Sri Lanka Institute of Advanced Technical Education (SLIATE) as well as the Ministry of Skills Development and Vocational Training. Admittance to state universities is determined by A Level results (considering both the standardized examination scores and the district quota system). University entrance has become progressively competitive due to the limited space available in public universities.

University education in Sri Lanka started in 1921, with establishment of University College. In 1942, University College became a full-fledged university—the University of Ceylon—and is now known as the University of Colombo. The University of Ceylon was modeled on the Oxbridge formula, and remained an elite-oriented university. Creation of an English-speaking Christian class, from which personnel for public services and other colonial administration positions could be recruited, was the major objective of the colonial higher education system (Jayasundara 2014).

The introduction of free education opened the door to higher education for all children, based on the student's performance at A Levels. The district quota system, introduced in 1971, benefited candidates from underprivileged rural areas. Parliament passed the *Mahapola Higher Education Scholarship Trust Fund Act No. 66 of 1981* to assist students with financial difficulties throughout their university educations.

Institutions offering higher education range from public institutes and universities directly under central government control, to private institutes conducting

degree and professional programs. Majority of universities and higher education institutions come under the MOHEH (World Bank 2009b). The MOHEH, established to regulate, expand, and develop institutions in higher education, is responsible for developing operational policy and strategy for higher education, including the private higher education sector. Some of the MOHEH's operational tasks are delegated to the UGC and SLIATE (MOHEH 2013). Public higher education institutions include public universities, the Open University of Sri Lanka, public postgraduate and specialized institutes, and advanced technical institutes. Two universities are directly under the purview of the MOHEH (Pali and Buddhist University and Bhiksu University). The UGC governs 15 state universities and 18 other higher education institutes. Advanced technological institutes are governed by the SLIATE (Figure 4.2).

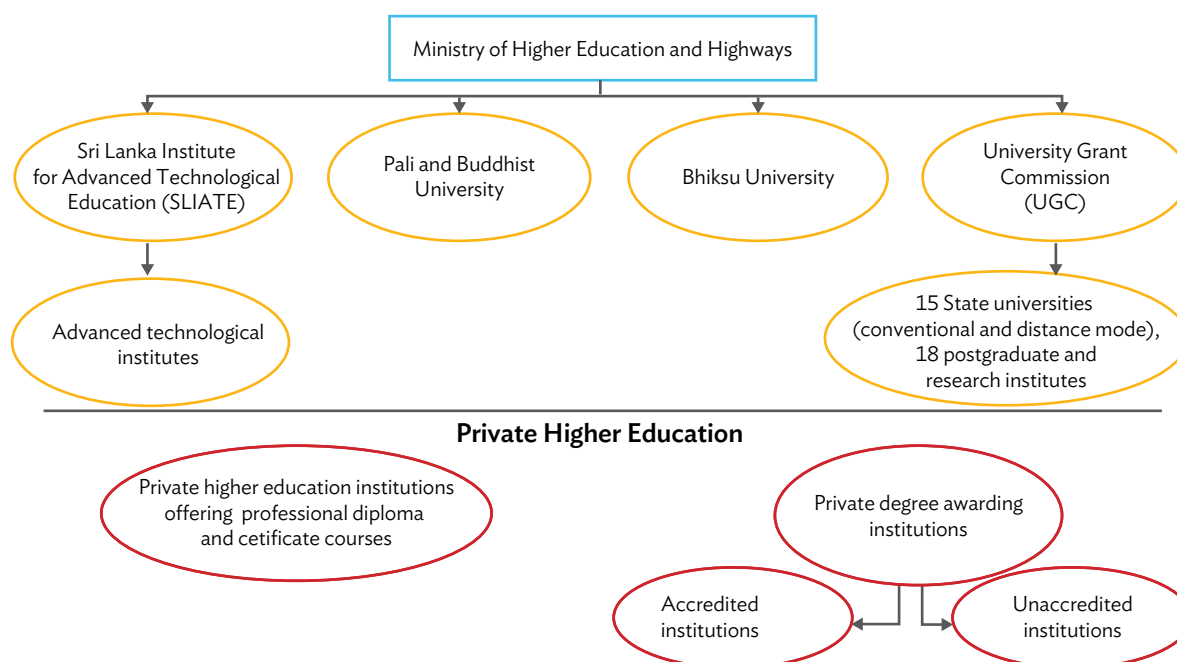
The UGC is the apex body managing state universities and postgraduate institutes. The UGC was established under the *Universities Act No. 16 of 1978* (UGC 2106). Its main functions include planning and coordinating university education, managing

budget allocations, controlling expenditure of higher education institutions, maintaining standards, regulating university administration, and regulating the admission of students into higher education institutes (UGC 2016). The UGC has also established a quality assurance system to maintain the standards of academic programs offered by universities and other higher educational institutes (CBSL 2016).

Institutes offering higher national diploma certificates (advanced technical institutes) come under the SLIATE, which was established by an act of parliament for fostering advanced technical education at the postsecondary level in engineering and business studies. The SLIATE supervises 16 advanced technical institutes. They offer courses in accounting, management, business, engineering, information technology, agriculture, and English (MOE 2013a).

The degree of autonomy and accountability varies within the higher education sector. Public universities enjoy greater autonomy than institutes under the SLIATE in recruitment of academic staff, teaching, curriculum development, and research. However, the

Figure 4.2: Higher Education Structure



Note: General Sir Kotelawala Defence University (KDU) comes under the Ministry of Defense and the University of Vocational Technology (UNIVOTEC) comes under the Ministry of Skills Development and Vocational Training.
Source: (World Bank 2009b).

MOHEH supervises many other aspects of public universities. Private higher education institutions, by contrast, are almost fully autonomous, operating mainly under institutional mandates for nonprofit institutions and market forces for profit-making institutions (World Bank 2009b).

4.2.2. Technical and Vocational Education and Training

TVET has evolved in the last 3 decades, with the establishment of many agencies for vocational training in the public and private sectors. The TVET system allows school leavers that cannot enter tertiary education to continue their skills development. TVET offers several levels of programs that accommodate students with different levels of school education.

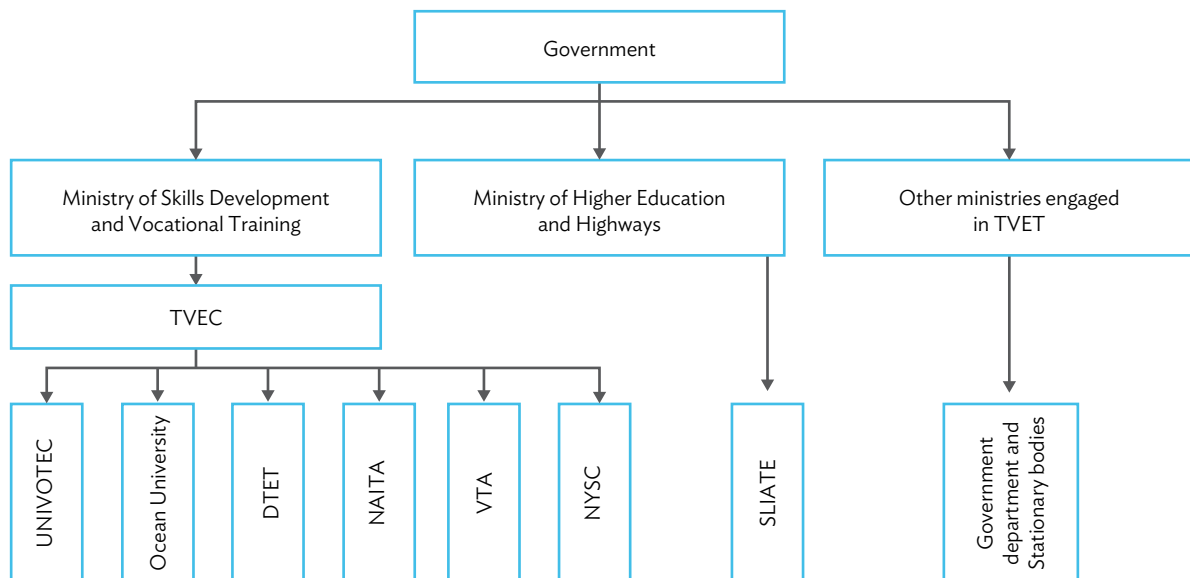
The TVET system comprises a wide array of institutions, including public and private sector training providers, standards and curriculum development agencies, and a regulatory body (Figure 4.3). As of 2015, 635 public institutions and 718 registered private and nongovernment institutions offered a

variety of vocational tracks, such as information and communications technology (ICT), construction, languages, finance, automobile maintenance, textile and garments, hotel and tourism, design and media, office management, agriculture plantation and livestock, gems and jewelry, and printing (CBSL 2016).

Key public institutions include the Ceylon–German Technical Training Institute, Department of Technical Education and Training, National Youth Services Council, Sri Lanka National Apprenticeship and Industrial Training Authority, University of Vocational Technology, and Vocational Training Authority. Almost all state training institutions have been brought under the Ministry of Skills Development and Vocational Training, which is a progressive step for managing TVET toward a common goal.

The Ceylon–German Technical Training Institute specializes in automobile engineering and the National Institute of Fisheries and Nautical Engineering provides job-specific training for the fisheries industry. Advanced technical colleges, managed by the SLIATE, come directly under the MOHEH.

Figure 4.3: Technical Education and Vocational Training System



Note: Private sector and NGO TVET institutions do not come directly under TVEC though they are registered under TVEC.

DTET = Department of Technical Education and Training, NAITA = National Apprenticeship and Industrial Training Authority, NGO = nongovernment organization, NYSC = National Youth Services Council, SLIATE = Sri Lanka National Apprenticeship and Industrial Training Authority, TVEC = Tertiary and Vocational Education Commission, TVET = technical and vocational education and training, UNIVOTEC = University of Vocational Technology, VTA = Vocational Training Authority.

Source: World Bank (2005).

4.2.3. The Administrative Structure of Education

The public education system remains the predominant provider of general education (up to grade 13), with 10,997 schools, 92% of them public schools. In 2015, about 4.1 million students were taught by 236,999 teachers in public schools, yielding a student-teacher ratio of 18:1 (CBSL 2016). Table 4.1 presents key statistics.

Public schools vary in their management (ministry and provincial council) and language of instruction (Sinhala or Tamil). Only 3% of public schools are national schools that come directly under the Ministry

Table 4.1: Trends in Education Provision, 2000–2015

	2000	2010	2015
General Education			
Number of schools	10,615	10,492	10,997
Government schools	9,976	9,675	10,144
Pirivena schools ^a	561	719	853
Private schools	78	72	78
Special schools ^b		26	25
Government Schools			
Number of teachers	186,097	215,692	236,999
Number of students	4,193,908	3,932,722	4,129,534
Higher Education			
Number of universities	13	15	15
Number of new admissions	11,805	21,547	25,624
Number of lecturers	3,241	4,918	5,525
Other Public Higher Education			18
Nonstate Registered Higher Education			16
Number of Registered Institutions			
Government and semi-government	556 (2001)	939	1,362 (2014)
Private	252 (2001)	898	1,240 (2014)
Nongovernment	112 (2001)	240	99 (2014)
Intake	67,612 (2002)	96,620 (2009)	254,091 (2014)
Public Expenditure on Education (SLRs million)^c	30,929	104,248	225,047
Current expenditure	23,794	85,195	169,600
Capital expenditure	7,135	19,053	55,447

^a Monastic college (similar to a seminary) for the education of Buddhist priests.

^b Special schools are for differently abled children.

^c Government expenditure on general and higher education.

SLRs = Sri Lanka rupees.

Sources: UNDP (2012); CBSL (2016); TVEC (2015a).

of Education (MOE); the other 97% are governed by provincial councils. Of the public schools, 63.0% offer education in Sinhala and 29.8% in Tamil. The quality of the education provided also varies due to resource constraints.

Public schools are classified into four categories based on the grade span and the courses offered (Table 4.2). Only about 10% of schools have facilities to teach A Level science streams.

The central government and provincial councils control the provision of education in accordance with the 13th Amendment to the Sri Lankan Constitution for the devolution of power to the provinces. The MOE is responsible for making policy based on National Education Commission (NEC) recommendations, planning and developing the education sector, maintaining educational standards, and formulating national curriculums. The MOE is also responsible for training through the National Institute of Education (NIE), providing teacher education, managing national schools, administering public examinations, preparing resource allocations, and facilitating funding and subsidies for students and schools. The MOE also regulates teacher education and training offered at national colleges of education and teacher training colleges (MOE 2013b).

The MOE plays a major role in coordinating its provincial and zonal offices, and schools. The MOE monitors and evaluates development plans prepared at the zonal and provincial level, and provides feedback to schools (MOE 2013b).

Table 4.2: Government Schools by Functional Grade

Functional Grade	Curriculum	Number of Schools
1AB	With Advanced-Level science stream classes	1,004
1C	With Advanced-Level arts and or commerce streams, but no science stream	1,801
Type 2	With classes only up to grade 11	3,462
Type 3	With classes only up to grade 8	3,877
Total		10,144

Source: MOE (2015).

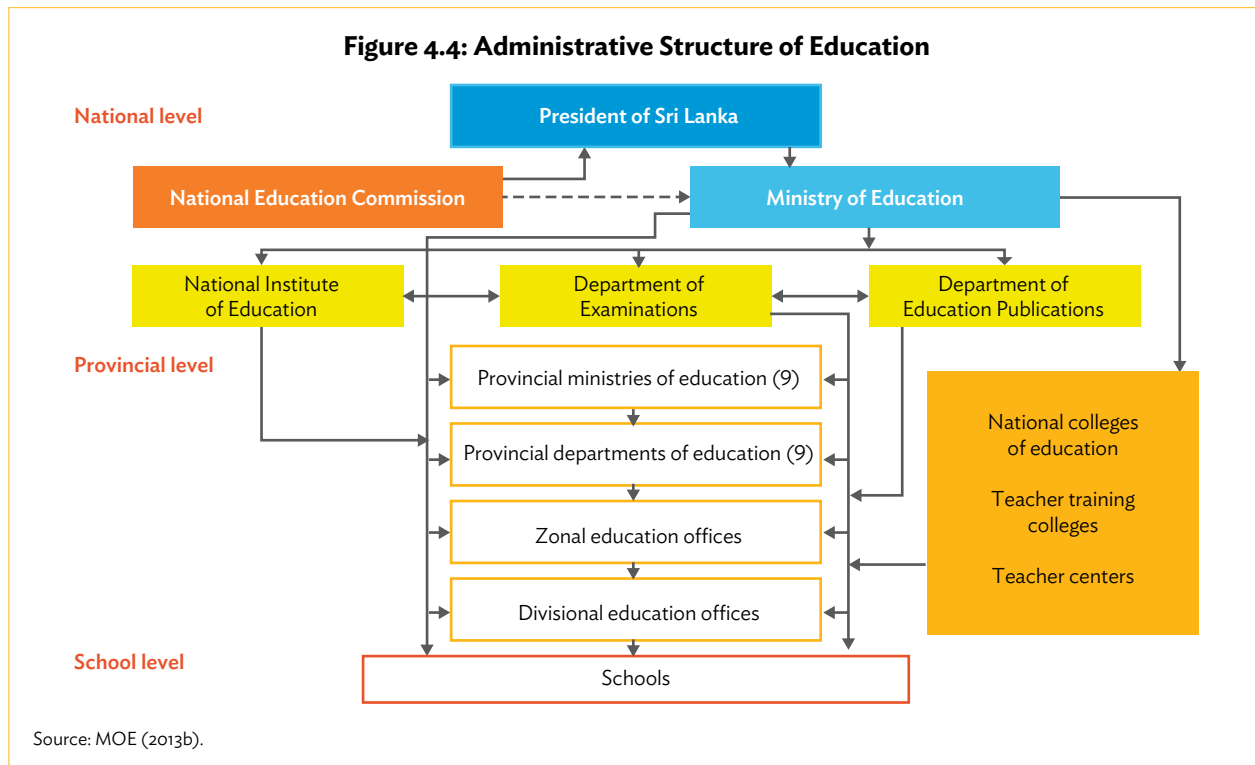
As Figure 4.4 shows, the MOE reports directly to the president and the Cabinet of Ministers on matters pertaining to the education sector. The MOE secretary manages all activities coming under the MOE, and is assisted by additional-secretaries in charge of divisions and directors of education in charge of specific subjects. The NIE, the Department of Examinations, and the Department of Educational Publications function under the MOE. The NIE is responsible for the development of curriculums, training of teachers, and research on education. The Department of Examinations handles public examinations. The Department of Educational Publications publishes and distributes school textbooks.

The provincial councils govern most public schools, except the national ones. Each province has a provincial MOE and department of education managing schools within the province, to decentralize administrative functions. Provincial education authorities adopt policies to suit the requirements of their schools. Such policies are incorporated in provincial statutes, and are communicated to schools through the provincial departments of education.

MOE's National Schools Branch controls the national schools directly and overlooks all functions. The branch updates policies, formulates plans for the development of national schools, and recruits school staff. The branch also conducts programs for educational quality development of national schools and for the proper management of physical and human resources (MOE 2013b).

The provincial councils, ministries, and departments of education are tasked with enabling the smooth functioning of education in each province and ensuring a standard consistent with national policies and norms. They are responsible for preparing and implementing provincial education development plans, determining budgetary requirements and distributing funds, managing provincial schools, monitoring and evaluating the schools, managing academic staff, and conducting training and skills development programs for teachers. They also ensure educational provisions for children with special needs and development of special and nonformal education.

Figure 4.4: Administrative Structure of Education



The provincial administrative centers are further divided into educational zones headed by a zonal director of education, with about 100–150 schools operating in each zone. Zonal education offices prepare the zonal strategic plan and the annual implementation plans based on the educational requirements in the zone. Their main roles are to facilitate communication between schools and the MOE and hold monthly meetings with school principals to monitor the implementation and progress of school plans.

The educational zones are subdivided into divisional education offices, which maintain a close relationship with the school administrations. The zonal office delegates to the divisional director the monitoring of Type 3 schools (Table 4.2) with less than 100 students (MOE 2013a).

Each school is managed by a principal, with support from the school development committee, consisting of staff, alumni, parents, and the zonal director. Previously, zonal and provincial authorities had more control over the management of schools. But the current system encourages school-based management through the Program for School Improvement, which gives schools managerial and financial decision power through the School Development Committee. The committee is accountable for transparency in decision-making.

4.2.4. Keystone Policies and Recent Reforms

Over the years, several measures have enabled the country's education system to improve the equity of education, irrespective of socioeconomic and regional differences (Table 4.3). The Education Ordinance of 1939 and the principle of free education embraced in 1947 were among the earliest policies for universal and equal access to education for all. The free education policy can be considered a milestone of social welfare and justice, especially benefiting children from rural areas and low- and middle-income families.

Table 4.3: Landmark Policies of the Education System in Sri Lanka

Year	Policy
1939	Enactment of the <i>Education Ordinance No. 31 of 1939</i>
1947	Introduction of free education from kindergarten through university
1961	State takes over schools managed by denominational institutions to ensure education devoid of discrimination
1987	Devolution of power to provincial councils
1998	Enactment of compulsory education regulations—enrollment of all children aged 5–14 in schools

Source: MOE (2013b).

Two other key historic policy changes directly improved access to education: the change from instruction in English to Sinhalese or Tamil, and the nationalization of private schools in 1961 (Jayasundara 2014).³¹ The government took over most private schools established before 1961, although some were allowed to continue to function as private schools under MOE supervision.

In recent decades, government and public attention has turned to learning achievements beyond basic literacy. The NEC was established under the NEC Act of 1991 and vested with responsibility for formulating national policies on education to enable the system to respond to changing needs. Although the NEC recommends education policy reforms every 10 years, the recommendation has not been implemented. The NIE was established in 1985 as a corporate body functioning under the MOE to formulate school curriculums. According to set policy, the curriculum is revised every 8 years.

Following NEC recommendations in 1995 and reforms proposed under the Presidential Task Force on General Education in 1997, educational reforms were implemented in 1997 with the aim of improving access and equity, while also improving the quality of education. The reforms included enacting compulsory education regulations for children aged 5–16 years, curriculum reforms, and school rationalization.

³¹ The White Paper on Education (MOE 1964) made Sinhala and Tamil the languages of instruction in all schools and effectively stopped the enrollment of students in English medium classes from 1965.

To improve the curriculum, the reforms aimed to modernize and improve competencies in science, mathematics, ICT, and English, which are deemed to be in high demand in the employment market. Measures were taken to move toward a competency-based curriculum from an examination-based curriculum, promote English and ICT in education, and provide opportunities for children to gain life skills. The reforms introduced ICT as a common subject for all A Level students. English language instruction was reintroduced in 2001 for A Level science streams and for selected subjects at the secondary level.

In 2003, the NEC evaluated the 1997 curriculum and recommended a set of proposals for a National Policy Framework on General Education. Accordingly, the curriculum developed in 1997 for primary education (grades 1–5) was to be retained, but further reforms were recommended for the grade 6–11 curriculum as it was considered weak from the perspective of conceptualization and implementation. Recommendations included introducing compulsory activity-based projects and practical work in all subjects, modern learning-teaching techniques, and use of ICT as a tool for learning the teaching process. The NEC also recommended provision for teaching mathematics and science in all schools with A Level grades (NEC 2003).

Following these recommendations, the NIE introduced curriculum reforms for grades 6–11 in 2007, using a competency-based learning-teaching assessment model. The aim was to improve the capacity of students to apply their learning to everyday situations. To facilitate this approach, the NIE prepared teacher instruction manuals that explained the new student-centered learning-teaching process that all teachers were expected to follow. The reforms also strengthened the more demanded subjects, expanding the science syllabus, including introducing computer literacy under a “practical and technical skills” subject in the secondary curriculum.

The government announced 13-year mandatory education, so the upper age limit for general education moved to 18 years old. Parallel to the general education reforms, two presidential task forces—on university education and on TVET—were formed to strengthen

higher education. The task forces presented their recommendations in 1998. They included improving the quality and relevance of higher education programs and involving the private sector in training. Subsequently, the NEC presented a comprehensive National Policy Framework on Higher Education and Technical and Vocational Education in 2009, covering all areas of tertiary education in Sri Lanka (NEC 2009).

Studies have found that despite these reforms, the quality of education has changed little (Liyanaga 2014). Moreover, the studies reveal that there has been little improvement in the over-loaded curriculum, outdated teaching methods, and the traditional examination system that requires only memorizing information. Some teacher training programs were found to be unsuccessful because the resource people—university academic staff—were not involved in developing the curriculum or the final tests, or in evaluating the test results (World Bank 2011).

The NIE’s evaluation of the 2007 curriculum reforms points to several shortcomings, such as not basing the reforms on overcoming the weaknesses of the preceding curriculum; lack of proper pretesting of the curriculum for appropriateness; shortcomings in content, teaching methodology, and curriculum materials (textbooks, teacher instruction manuals); inadequate teacher knowledge about the new curriculum; and lack of proper monitoring and evaluation (NIE 2008).

Based on the findings of the NIE evaluation, curriculum reforms commenced again in 2015 for grades 6–11, in stages. NIE officials say the changes are to introduce a more skills-oriented curriculum and, as a remedy for gaps in teacher training, teacher trainers are trained in the provinces with new training manuals. Further, for the first time, the NIE has started monitoring and evaluating curriculum reforms at the school level.

Implementation issues are a major reason for the slow progress of curriculum reforms. Data show (1) large disparities in the quality of education due to unequal distribution of resources, both human and physical; and (2) differences in students’ ability to afford the required materials, which is a major constraint at the ground level. For example, although English instruction

was introduced, it was recognized later that not enough competent English-trained teachers were available to sustain the reforms (De Silva 2013). Further, although the 1997 reforms identified the need for school activity rooms, financial constraints limited the ability to provide them.

Indeed, lack of funds is a key reason for implementation problems. The NEC argued that Sri Lanka's educational policies are formulated and put into practice without allocating the funds (NEC 2003) required to complete implementation and achieve the desired outcomes. Such issues urgently need remedy.

4.2.5. Financing of the Public Education System

As noted, education is provided predominantly by the public sector, and its financing is limited by the government budgetary processes and constraints. Sri Lanka had historically invested 2%–3% of gross domestic product in education. This declined after 2010 owing to an almost exclusive focus on infrastructure investment during 2010–2014 (Figure 4.5). Starting in 2015, the renewed focus on increasing social sector spending targeted education spending

to 6% of gross domestic product to help ensure that the system is delivering the skilled people needed for economic growth and development.

Overall, public education investment in Sri Lanka is relatively low compared with that of other countries in the region (Table 4.4). Of the budget, 80% is for recurrent expenditure, and the bulk of that (90%) is for teacher salaries and welfare programs (Figure 4.6). The very limited capital spending on education hinders the ability to improve facilities and increases households' out-of-pocket expenditure on education.

Table 4.4: Public Expenditure on Education, 2013

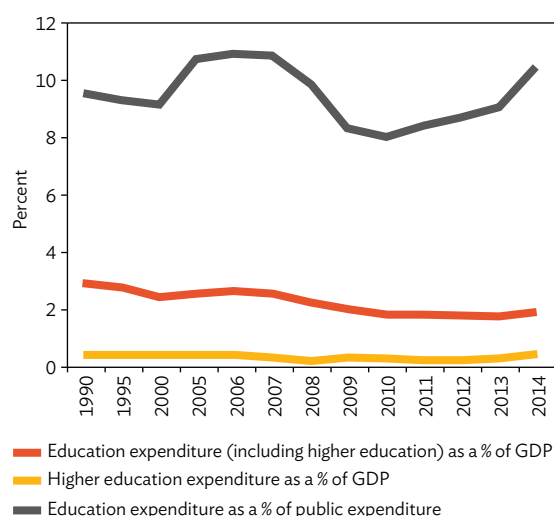
Country	% of GDP	% of Total Government Expenditure
Bangladesh	2.0	13.8
India ^a	3.8	14.1
Indonesia	3.4	17.6
Malaysia	6.3	21.5
Nepal	4.1	21.4
Philippines	3.4	20.3
Singapore	2.9	19.9
Sri Lanka	1.6	9.0

GDP = gross domestic product.

^a Data for India are for 2012.

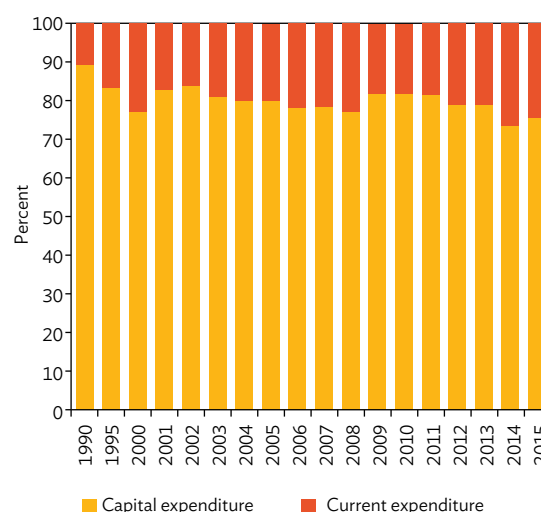
Source: World Bank (2013).

Figure 4.5: Public Expenditure on Education as a Percentage of GDP and Public Expenditure, 1990–2014



GDP = gross domestic product.
Sources: CBSL (2016); UGC (2014).

Figure 4.6: Share of Recurrent and Capital Expenditure on Education, 1990–2015



Source: CBSL (various years).

Similarly, investment in higher education has been held back due to limited public funding. Figure 4.7 shows that higher education currently accounts for 24% of total public spending on education. At the same time, the ability of public universities to raise funds for improving their standards is severely limited. In addition, the government spends only 5% of its education budget on TVET. Lack of resources has limited the expansion of tertiary and vocational education and constrained improvements of its quality and relevance to the labor market.

Further, the state has monopolized degree provision in higher education, which has limited the private sector's involvement. Although there is no legal barrier for private universities to be established and function, they are unable to offer degrees unless affiliated with a foreign university. Some higher education institutions have attempted to get the authority to award degrees, but they have not been successful for political reasons and regulatory issues pertaining to controlling educational quality. Affiliation with foreign universities increases a school's, and hence its students', education costs. Notwithstanding this, limited placement opportunities in the state schools have resulted in the emergence of a parallel system of

nonpublic higher education institutes, many affiliated with foreign universities, to cater to the rising demand for higher education.

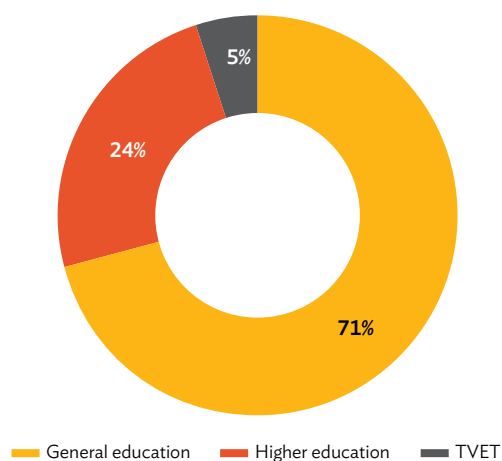
4.3. Access to and Completion Rates of Education

General Education. Although net enrollment rates in the primary level were 96% and at junior secondary levels were 92% in 2012,³² the rates dropped to 81% in the upper secondary level (grades 10–11), and 43.5% in the collegiate level (grades 12–13).³³

Access to primary and junior secondary education is almost equitable across income groups. However, children from lower-income groups are less likely to access education at the collegiate level—enrollment rates vary from 20% in the poorest decile to 64% in the richest.³⁴

Many students discontinue education or do not qualify for higher education due to poor performance on the national level examinations. Each year, about 300,000–400,000 students take the O Levels; about 60% qualify for A Levels (Table 4.5), and about 200,000–250,000 students take the A Levels, but only 60% qualify to enter public universities. Thus, about 150,000 (O Levels) and 100,000 students (A Levels) leave the school system without progressing to the next higher level. Furthermore, school completion

Figure 4.7: Share of Education Expenditure by Level of Education, 2014



TVET = technical and vocational education and training.
Source: MOFP (2015).

Table 4.5: National Examination Success Rates, 2000–2015

	2000	2005	2010	2015
Ordinary-Level Examinees (#)	471,309	445,679	433,709	314,635
Qualifying for Advanced-Levels (%)	29.34	46.61	58.79	58.68
Advanced-Level Examinees (#)	183,439	204,030	233,354	255,191
Qualifying to Enter University (#)	91,589	116,506	142,415	155,447
Qualifying to Enter University (%)	49.93	57.20	61.67	60.91

Source: DCS (various years), Statistical Abstract.

³² Net enrollment rates measure enrollment of the official age group for a given level of education as a percentage of the corresponding population

³³ Calculations based on DCS (various years), Household Income and Expenditure Survey 2012/13.

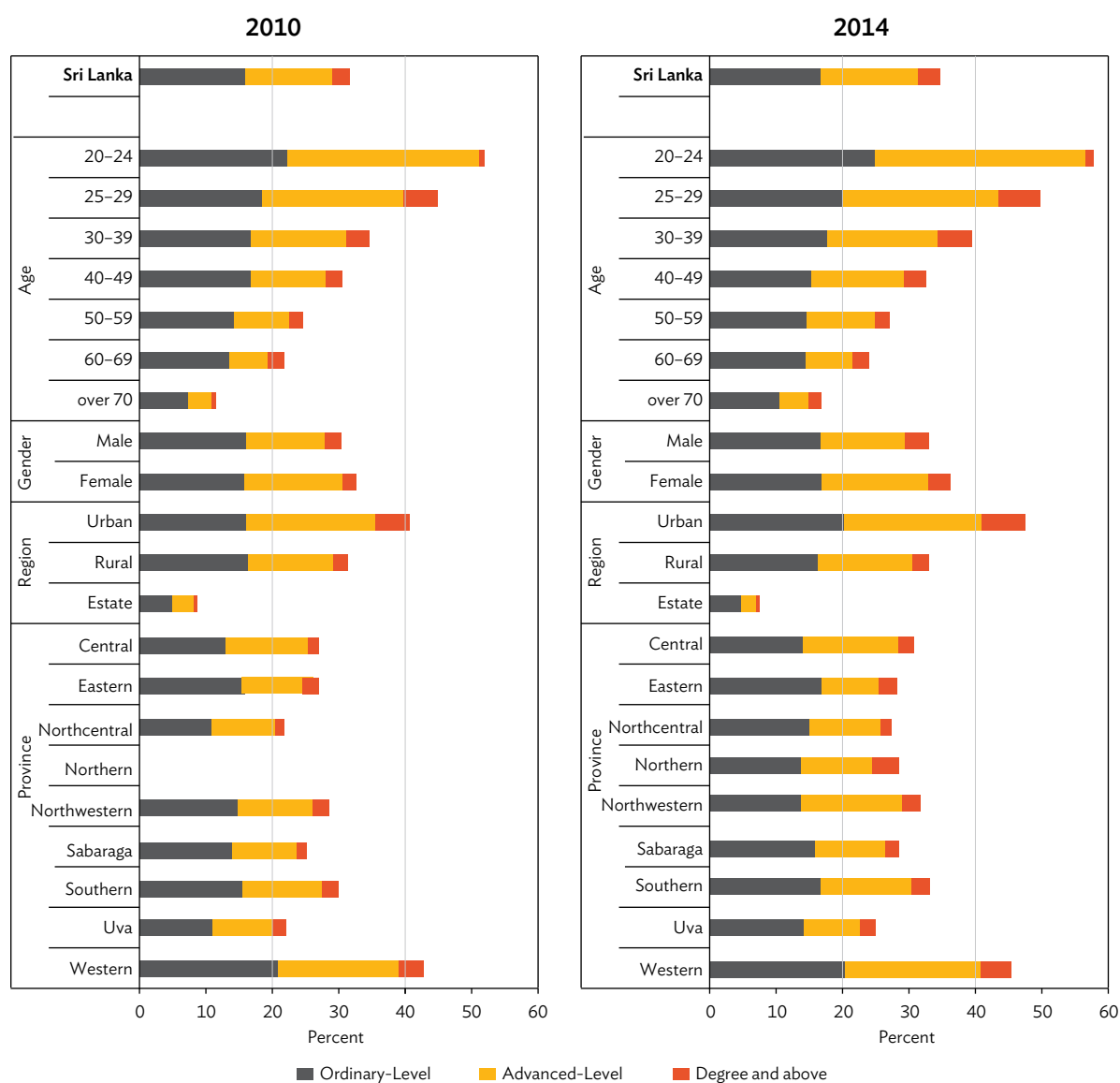
³⁴ Calculations based on DCS (various years), Household Income and Expenditure Survey 2012/13.

rates vary widely between rural and urban populations, males and females, and geographical location (Figure 4.8).

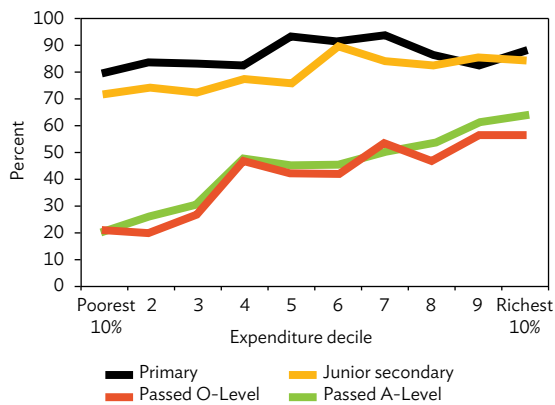
Completion rates in all levels of education cycles show room for improvement. There are disparities in education completion rates by income groups, as markedly reflected in the O Level and A Level success rates (Figure 4.9). For example, in the O

Level examinations, more than half of children in the richest decile pass but only 20% of those in the poorest decile do so. Similar disparities are seen in the A Level examinations. Although state education services are free, parents have to cover fees for private tutoring, which has become crucial to success in the national examinations. Thus, affordability is a reason behind the disparity in passing rates.

Figure 4.8: Level of Education Completed (age 20 and above)



Source: Calculations using DCS (various years). Sri Lanka Labour Force Survey data for 2010 and 2014.

Figure 4.9: Completion Rates of Major Education Cycles


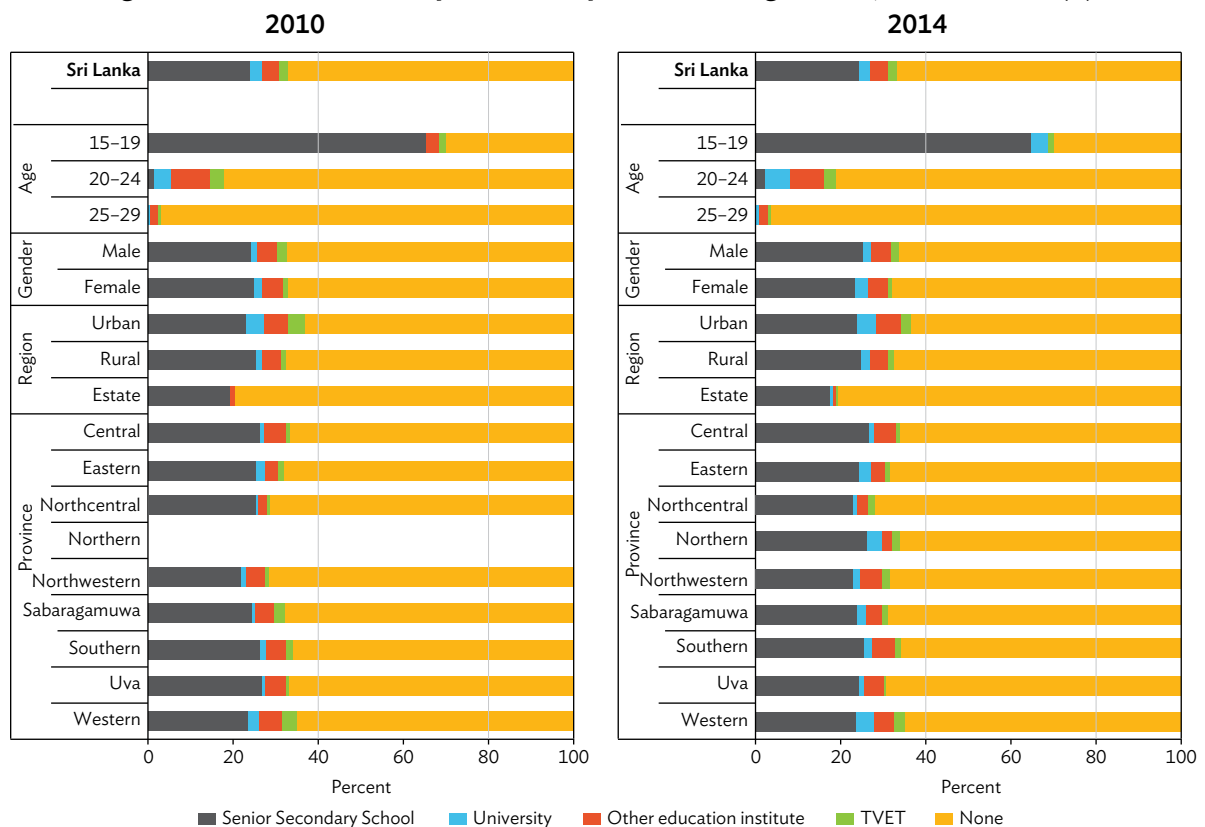
A-Level = Advanced Level examination, O-Level = Ordinary Level examination

Note: Completion rate is defined as percentage of children in the official age group completing the education cycle.

Source: Author's calculations using DCS (various years) Household Income and Expenditure Survey 2012/13 data.

Higher Education. Higher education and technical training enables the country to cater for the skills needed by the labor market, adjust to changes in technology, fuel innovation, and thus create more productive jobs. Sri Lanka faces a major challenge in enhancing the responsiveness of higher education and training systems to cater to the emerging skill requirements.

The tertiary enrollment rate is low: in 2014, only 5% of people aged 20–24 were enrolled at a university, another 8% were enrolled in other educational institutions, and only 3% of the same age group were enrolled in TVET courses (Figure 4.10). Sri Lanka's gross tertiary enrollment rate, at 21%,³⁵ is below the average of lower middle-income countries (22%) and upper middle-income countries, at 44% (World Bank 2014). The 2012 population census shows that only 470,000 individuals aged 25 and above had

Figure 4.10: Senior Secondary and Tertiary Enrollment Ages 15–29, 2010 and 2014 (%)


TVET = technical and vocational education and training.

Source: Authors' calculations using DCS (various years), Labour Force Survey data for 2010 and 2014.

³⁵ Total enrollment in tertiary education (International Standard Classification of Education 5 and 6), regardless of age, as a percentage of the total population of the 5-year age group following on from secondary school leaving.

completed a degree or higher-level education, a mere 4% of that population (DCS 2015a).

To increase opportunities for higher education, the university intake increased from 21,547 students in 2010 to 25,624 in 2015 (CBSL 2016). Yet, of the 149,572 students who passed the A Level examinations in 2014/2015, only 17% were accommodated in state universities, leaving more than 120,000 qualified students unable to enter.

Furthermore, financial constraints and lack of investment in the education sector have resulted in a dearth of good quality research and innovation within the university system, compared with that in other developing nations (World Bank 2009b). Other concerns include growing political influence, campus violence, and unrest among state university students, including constant strikes and reports of bullying. Strikes and protests instigated by political parties have led to sporadic closure of universities, prolonging the time students take to complete degrees.

Technical and Vocational Education and Training.

TVET in Sri Lanka has made notable progresses since 1980 (ADB 2014). The Ministry of Youth Affairs and Skills as well as the Tertiary and Vocational Education Commission were established to oversee TVET activities. Currently, public, private, and nongovernment providers serve the TVET subsector. The TVET subsector has an annual enrollment of more than 150,000 students and operates through a nationwide training service network. TVET is in a position to address both the quality and productivity aspects of labor; however, some challenges remain. Regional skill inequality is still a challenge, which affects labor mobility. More attention should be given to strategic planning, performance-based funding, performance monitoring, capacity development, and institutional autonomy.

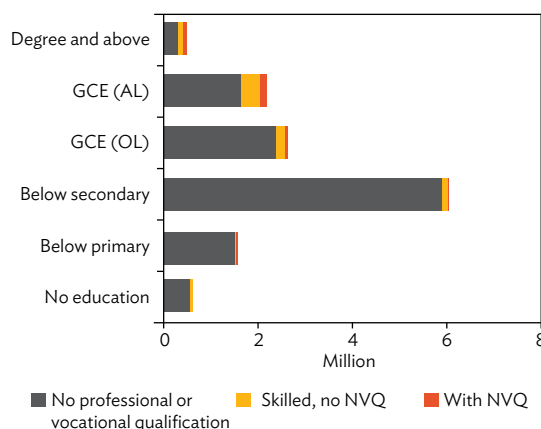
Further, there is no proper career guidance system to advise the school leavers. The flow of information between the youth and the labor market is inadequate. The lack of information regarding the types of job opportunities limits graduates' ability to form realistic aspirations for and establishment of life goals. After

taking O Levels, some students spend 2 years pursuing A Levels in fields that are not in demand in the market, rather than entering vocational training.

Most school leavers engage in casual jobs that do not require or nurture valuable job skills. Only about 10% of people aged 20 and above have formal professional or technical training relevant to their occupation. About 44% of the working population is unskilled and has not completed secondary education (Figure 4.11). In 2014, only 2% of the relevant age cohort had earned National Vocational Qualification.

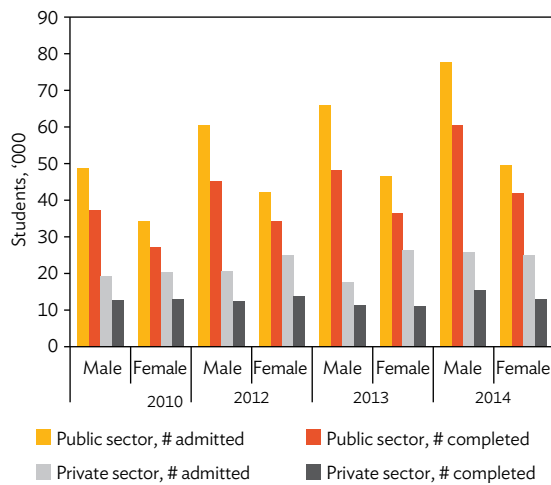
Reasons for this lack of skilled people include low general enrollment in the country's TVET institutes (Figure 4.12). People hesitate to enroll in TVET institutes because many employers do not consider the graduates to be well qualified for the skills needed, and standards vary between institutions. A baseline survey of the TVET sector commissioned in 2014 by the Technical and Vocational Education Commission revealed that only 26% of training programs in the overall TVET sector are conducted in line with National Vocational Qualification standards (TVEC n.d.). Further, the completion rates have some room for improvement (Figure 4.12).

Figure 4.11: Professional and Vocational Qualification, by Level of Education
(age 20 and above)



A-Level = Advanced Level, GCE = General Certificate of Education, NVQ = National Vocational Qualification, O Level = Ordinary Level.
Source: Calculations using DCS Census 2012 data (DCS 2015a).

Figure 4.12: Performance of TVEC-Registered Tertiary and Vocational Education Institutes by Sector, 2014



TVEC = Technical and Vocational Education Commission.
 Note: Based on data from 287 of the 557 private training institutes registered with the TVEC.
 Sources: TVEC and Ministry of Skills Development and Vocational Training (2015); TVEC (2015b).

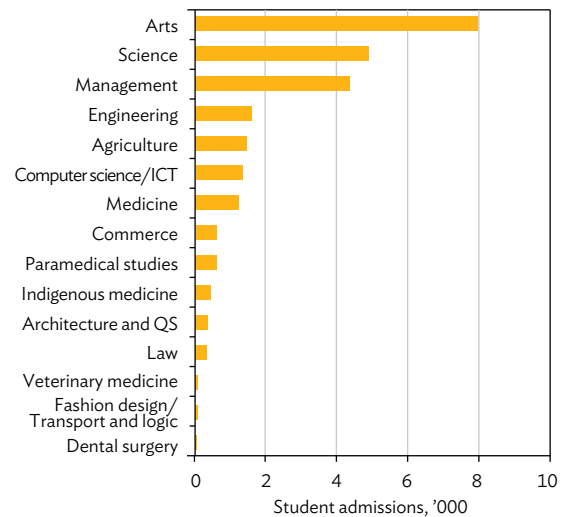
There is a wide gap between what is taught in schools and what is needed in the world of work. The NEC sector review concluded that the country's education system has failed to adequately promote good quality and relevant education or to orient students to the world of work (NEC 2003). This is primarily because the education systems do not transfer many productive skills to students. As a result, the demands of the market and the skills of school and university graduates are mismatched.

The mismatch results from an outdated curriculum aggravated by the lack of interaction with the private sector when designing degree programs (NEC 2009). Nearly one-third of university students are enrolled in the arts (Figure 4.13). An MOHEH graduate employment census in 2012 showed that arts graduates had the lowest employment rate, at 32%, whereas over 90% of engineering, ICT, and medicine graduates were employed, showing that such graduates were highly sought after by employers (Figure 4.14).

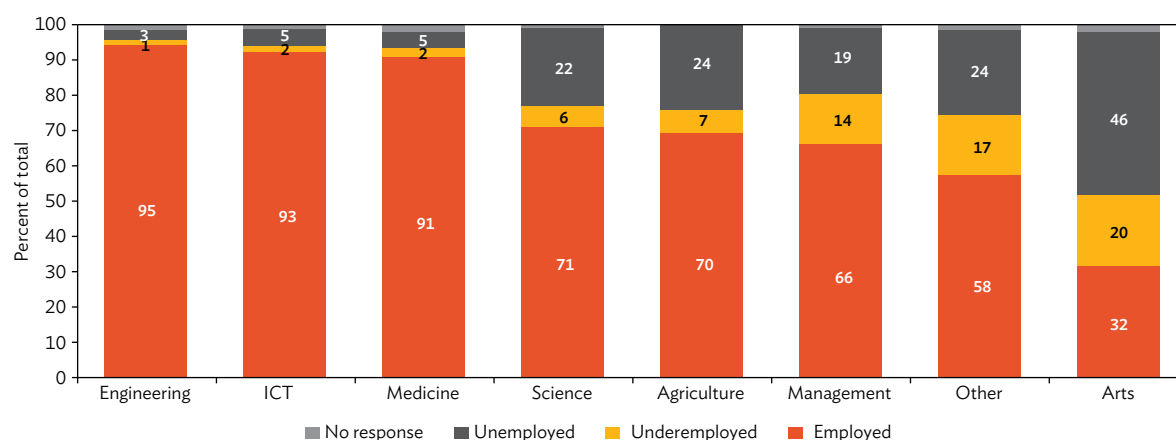
4.4. Employability and Skills Match

High-quality human resources with science and technology knowledge and a skilled labor force are necessary to support Sri Lanka's ambition to become globally competitive. A match between student skills and labor market demand is crucial for the most effective and efficient use of human resources. To continue its transition as a middle-income emerging economy, Sri Lanka will have to rely on efficiency-driven productivity growth propelled by a skilled work force that is able to create and adapt to new technologies, and has the general skills needed to be competitive in the global market. The government's strategic plan focuses on three themes: increasing equitable access to primary and secondary education, improving the quality of primary and secondary education, and strengthening the governance and service delivery in the education sector.

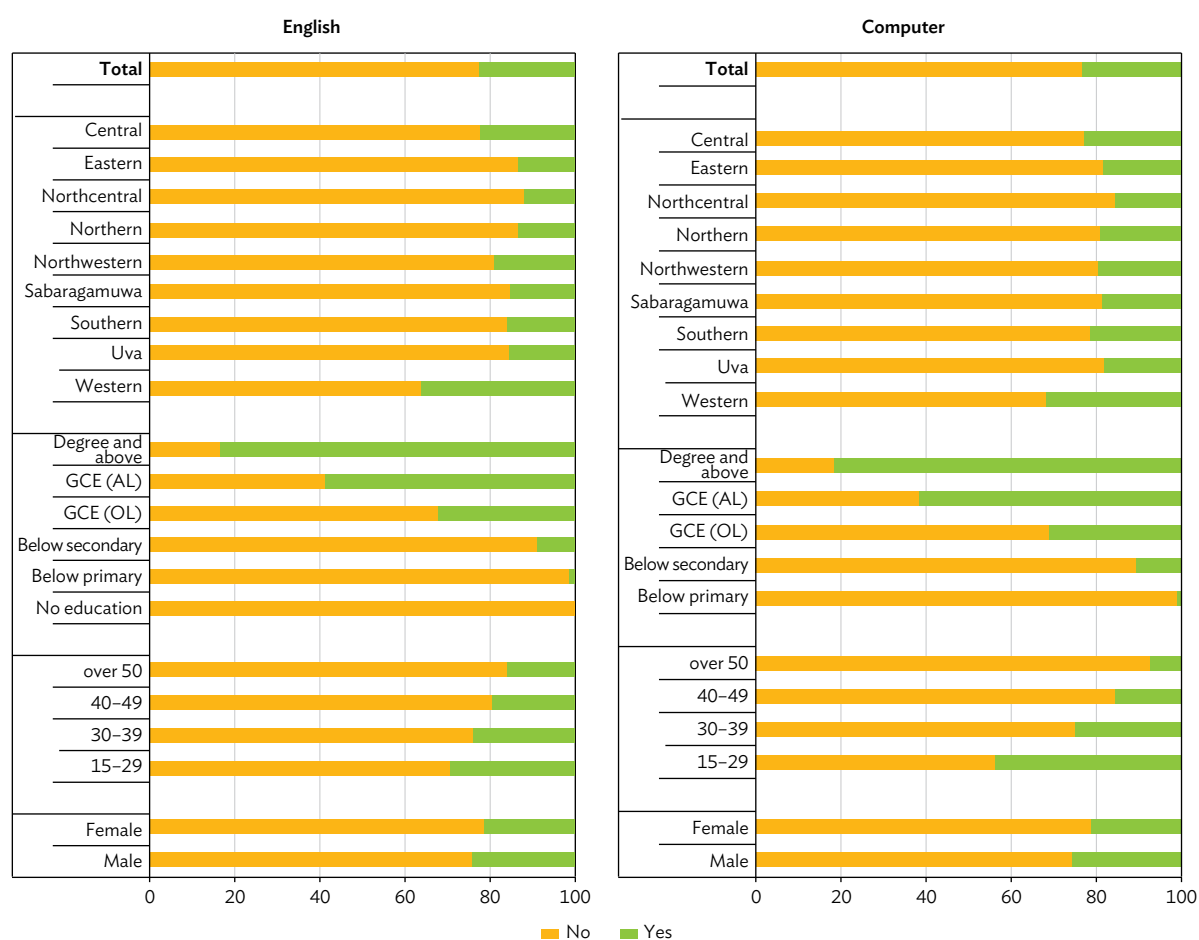
Figure 4.13: Distribution of University Admissions by Subject, 2014/15



ICT = information and communication technology, QS = Quantity Surveyors.
 Source: UGC (2014).

Figure 4.14: Employment Status of Graduates by Subject Stream

ICT = information and communications technology.
Source: MOE (2015).

Figure 4.15: English and Computer Literacy, Population Age 15 and Above (%)

AL = Advanced Level, GCE = General Certificate of Education, OL = Ordinary Level.
Source: Calculations using (DCS 2015a).

In recent years, governments have recognized the need to create an activity-based curriculum relevant to the labor market. While attempts were made to improve the quality of education through the 1997 and 2007 curriculum reforms, shortcomings remain in curriculum design, development, and implementation (NIE 2009).

ICT and English language are the most demanded skills in the country. English speakers have access to better quality jobs with higher salaries and benefits at home and abroad. Yet the population census of 2012 revealed that, of people aged 15 and above, English literacy (ability to speak, read, and write) was just 22% and computer literacy was only 23%. As expected, both English and computer literacy rates were higher among younger age cohorts (Figure 4.15).

As Figure 4.14 indicates, although job opportunities were available for graduates of science streams, only 24% of students were pursuing A Levels in science subjects (MOE 2015).

To address this gap, a new technology stream was created in 2013 for the A Levels, and an A Level examination was introduced from 2015. The aim is to provide students with job-oriented practical knowledge and training, enhancing their likelihood of employment after school (Box 4.1). Under the 1,000 school program, a large number of schools began science stream, but the increase in science enrollment is not picking up as anticipated.

4.5. Policies to Help Bridge the Skills Gaps

To pursue its economic transition, Sri Lanka's productivity growth will have to be driven by efficiency. The present education system is inadequate for producing the required skilled work force. Critical issues include providing equal opportunities for good quality education, expanding opportunities for tertiary education, and addressing skill mismatches and skill gaps.

4.5.1. Current Plans for Improving Training and Skills

Several initiatives are in process to improve education at all levels. The overall education policy framework focuses on three key themes: increasing equitable access to primary and secondary education, improving the quality of primary and secondary education, and strengthening governance and service delivery in the education sector.

The priorities of policy reforms include formulating a national education policy on general education, making 13 years of education mandatory, reforming the curriculum, reforming examination and evaluation systems, strengthening teacher education and management, and supervising and regulating international schools. The MOE is implementing the "Nearest School is the Best School" project during 2016–2020, to provide equal education opportunities for all.

Box 4.1: Technology Stream for the Advanced Level

A new technology subject stream for the General Certificate of Education A Level was introduced in 2013. The first batch of students in the new stream took the A Level examinations in 2015. The Ministry of Education launched the new stream in collaboration with the Youth Affairs and Skills Development Ministry to provide practical knowledge and training that is likely to facilitate employment after graduation.

The technology stream was initially introduced in 200 schools and later expand to 1,000. Under the new stream, students can select three subjects: engineering technology or biotechnology, science for technology, and one subject from commerce and arts.

For students who follow this new subject stream and qualify for the university entrance, a science and technology faculty is created in the universities. For 2016, opportunities were available for 2,250 students to follow 28 courses in 13 universities. Course graduates will earn in a bachelor of science in technology degree from one of 25 participating university colleges.

Sources: Ministry of Education (n.d.), Technological Stream http://www.moe.gov.lk/english/index.php?option=com_content&view=article&id=1325:technological-stream&catid=419&Itemid=1093; Sunday Times (2013).

Due to limited public higher education opportunities, the government facilitates review panels and established the Standing Committee on Accreditation and Quality Assurance, to assure good quality education while encouraging private sector investment in Sri Lanka (CBSL 2016). Furthermore, there is a plan to establish an independent accreditation council, and a draft bill is being prepared. The World Bank's Higher Education Project (World Bank 2016b) will support the establishment of the independent accreditation council.

Further, the Budget Proposals in November 2015 stated that the government encourages the establishment of private universities and proposes that they should be monitored by the UGC to ensure that they provide high-quality education. The Budget Proposals included that at least 10% of placements in such schools should be awarded free of charge to students who have successfully completed the A Level examination. The government will provide tax incentives to local counterparts of such ventures. In 2017, the MOHEH launched an interest-free student loan scheme (up to SLRs 800,000 per program) for those who pursue higher education at private sector higher education institutions.

4.5.2. Reforms to Enhance Equitable Opportunities for General Education

Availability of Science and Technology Education.

To foster equitable opportunities for science and technology education, it is important to provide equal access to education for all students across the country. The government's 1,000 school program aims to increase access to science education, and between 2013 and 2016, the number of schools that offer the science stream at the A Level increased from 868 to 1,016. The government introduced the technology stream at 251 schools, and about 170 additional schools will offer the technology stream shortly. However, the quality of education is compromised as even the initial 251 schools are struggling to get an adequate number of qualified teachers, especially for engineering technology. The same applies to science education. While the government invested in 1,000 schools to provide science laboratories and 251

schools to provide technology faculty buildings and equipment, due to a shortage of teachers, the number of students is not increasing as envisaged. The quality of education should be emphasized.

Training and Equitable Distribution of Teachers.

To strengthen human resources, qualified teachers should be recruited for more demanding subjects such as science, mathematics, ICT, and English according to a proper procedure, through colleges of education. Currently, A Level teachers are required to have a bachelor's degree. Unfortunately, the College of Education alone cannot meet the demand for qualified science, math, and English teachers. All newly appointed teachers, including university graduates, should be given the initial 1 year of pedagogy training. During school vacations, all teachers should take continuing short periods of training (2–3 weeks) at district-level training centers. Attendance at and performance in continuing training should be taken into consideration for salary increments and promotions.

To address locational disparities in the provision of qualified teachers and improve their equitable distribution, incentives could be provided to those who work in rural areas. To attract qualified teachers and increase their retention, measures to motivate them, such as better salaries and working conditions, could be offered. Payment of a substantial monthly allowance, as practiced in some Organisation for Economic Co-operation and Development countries, and fully decentralized school-based teacher recruitment could also help to persuade teachers to accept appointments in schools in remote or otherwise difficult locations (World Bank 2011).

Regulation of Private Education. The government could take measures to encourage private investment in general education by lifting current restrictions on the establishment of private schools. Students who can afford private education could enroll in private schools, relieving some pressure on the state-funded schools and providing more space for the poorer students. International schools are currently allowed to operate, but are not subject to proper regulatory mechanisms. All private education institutes should be regulated by

incorporating new rules and regulations, especially for curriculum standards, teacher qualifications, school discipline, etc.

4.5.3. Reforms to Expand Opportunities for Tertiary Education

As noted in section 4.2, limited public resources for Sri Lanka's tertiary education constrain efforts to expand opportunities for students to achieve university education in the country. Most students who are not able to enter state universities opt for a certificate, diploma, or degree from a private institution, currently offered without state regulation or standards even though the UGC acknowledges degree programs offered by private higher education institute per the University Act. Therefore, it is important to explore ways of funding more good quality higher education.

Quality and standards should be maintained through effective monitoring and control. Although the proposed Quality Assurance, Equalization, Qualification and Framework Bill failed to pass in 2011, the regulatory mechanism for private institutes should be strengthened by incorporating new rules and regulations. It is crucial, therefore, to identify the standards desired of the private institutions, such as their student recruitment criteria, fee structure, academic programs, and quality assurance and accreditation. New institutions should be allowed to start accepting students only after obtaining a compliance certification from the relevant professional body.

Numerous countries have effectively combined private and public university education. Some of the best universities in the United States, for example, are public universities. To compete with the nonstate providers, Sri Lanka's state universities should be strengthened to become dynamic centers that respond to changes in the market in a timely manner. Public universities can generate income through postgraduate programs and other types of certificate programs, but do not have authority to spend the resources they generate. They need approval from the UGC, MOHEH, and Ministry of Finance through the planning and budgeting process.

Rethinking the governance structure of public universities and allowing them more autonomy to manage their affairs and raise funds could increase the resources available for public universities, a good example of which is the Postgraduate Institute of Management. More autonomy in managing affairs and raising funds should be allowed so that the students and their education programs are not negatively affected. For example, universities could rent out facilities (lecture halls and sports grounds) to generate funds for improving degree programs, if they first establish a mechanism to share available facilities among faculties to reduce the infrastructure needs of the universities.

4.5.4. TVET Subsector Development

Lack of resources has limited the expansion of TVET and constrained improvements to its relevance and quality. Improved TVET is essential for Sri Lanka to respond to the changing labor market needs by providing individuals who possess specific demand-driven skills. Thus, spending on and funding for tertiary education needs to increase substantially.

Public-private partnerships and schemes of recruitment through TVET institutes directly to the industry are essential to increasing the supply of skilled workers to business. Two ways such programs could be financed, both of which require linking vocational systems with industries that can absorb graduates, are introducing (1) a voucher system whereby employers (state or private) repay the education loans of youths they hire that were previously unemployed, and (2) a system whereby private companies that recruit graduates from state-funded training institutes repay the pertinent education costs to the institutes.

The voucher scheme however may not be sufficient to attract private sector training providers to invest in infrastructure (such as buildings and equipment) for vocational training in hard technology. Most private sector training providers in Sri Lanka are engaged in ICT training where initial investment costs are low. However, graduates of these courses have low employment rates to date.

Students who are qualified to receive education could be given a voucher to cover their fees at institutions of their choice. Such schemes motivate the private sector to provide education in sectors where vouchers are available. Such indirect support of the private sector can create competition among schools while directly supporting students to gain training. In addition, institutions will be forced to perform well and provide market-relevant programs in order to attract students.

4.5.5. Reforms to Address Skills Gaps

To rectify the mismatch between the skills acquired through the education system and the requirements of the labor market, the school and university curriculums need to be reformed by introducing market-oriented subjects such as ICT and technology as core subjects in each A Level subject stream, especially in the arts stream. Curriculums should offer sufficient practical courses to provide the skills demanded in the globalized labor market. To enhance the relevance of education to the market, universities could coordinate with the private sector when designing courses.

In addition to employable skills such as analytical reasoning and critical thinking, curriculums need to foster cognitive skills (i.e., teamwork, communications, and work ethics). School education should increase the focus on such foundational skills to prepare a future workforce that can adjust flexibly to changing labor market demands and the skills required.

A minimum of 2 years training is recommended to address the skills gaps of students who leave school after taking O Levels. The training program would entail work-oriented technical courses in fields such as hotel and restaurant, construction, and textiles and

garments. Under the 13-year compulsory education policy initiative, a number of such open/applied subjects have been introduced to students who do not qualify to enter the academic streams, creating pathways for easy progression into vocational and technical education after completing 13 years of school education. Vocational education programs should be linked with industries that can absorb their students. Therefore, industries should be involved in developing the courses, which should also be relevant to regional development priorities. Public-private partnerships and schemes of recruitment through vocational education and training institutes directly to industry are essential for facilitating the flow of students into the labor market.

Students and education and training institutes need to be aware of the skills required by the labor market. Because most students are not aware of the opportunities presented by vocational training institutes, it is important to identify innovative, rapid, effective, and feasible strategies to reach school leavers and channel them into vocational training. To rectify the information gap, schools should provide awareness raising information to students directly after the O Level examinations. This would allow students to make better informed choices between vocational training and continuing to A Levels, and is particularly important for those whose O Level results preclude their continuing to A Levels. A well-planned awareness campaign would involve vocational training authorities, private sector institutes, and industry. In addition, institutional capacities for delivering vocational training programs should be enhanced with upgraded training material and equipment. Well-equipped district training centers with residential facilities are needed.

Chapter 5

The Welfare Dimensions of Employment Change in Sri Lanka and Sustainable Growth

5.1. Introduction

Most Sri Lankan families depend heavily on labor earnings to meet their living costs. Economic growth changes the structure of the economy and in turn transforms the composition of employment, with critical implications for the welfare of individuals and households from an income perspective. This chapter examines the qualitative aspects of the employment transformation that has accompanied Sri Lanka's growth in recent years. The economy has experienced distinct sectoral changes in the structural composition of output. Such changes shift the compositions of skills and the conditions of work in formal and informal employment.

This chapter traces how structural transformation at the macroeconomic level has been accompanied by welfare changes at the level of the individual worker. The welfare changes involve returns the working poor receive through informal activities as well as returns workers receive in the more formal parts of the economy. More specifically, the chapter attempts to shed light on

- how the structure of Sri Lanka's output and productivity has changed during recent times,
- the transformations in employment structure and skills that accompanied these output shifts, and

- the accompanying welfare changes in terms of the conditions of decent work and status of poverty.

The welfare dimensions of the employment changes focus on two employment-related outcomes. The first relates to how employment income changes are evolving, and hence looks at changes in wages and returns to self-employment. The second change relates to the nature of transition from informal employment into formal employment. This requires an analysis of two critical aspects of the change in employment structure in each broad sector of the economy: (1) the skill levels of the workforce, and (2) the contractual arrangements that characterize their work as formal or informal.

The process of transition from informal into formal employment is at the core of the developmental process, and can be assessed in terms of two structural transformations: external and internal. Transformation of the external dimension involves ascertaining the shares of formal and informal employment in each broad sector of the economy. The change in the extent or incidence of informality in a sector infers something about the spread of adversity and precariousness in that sector at a point in time. An analysis of changes over time can reveal whether transformation is moving in the "right" direction—toward formality. The internal dimension is the degree or depth of adversity

associated with informal employment in each sector as captured by measures of returns to employment, namely wages and income.

We therefore have employed a fourfold typology to assess how welfare related to employment changes may have increased or decreased:

The first, and best case, scenario would be for the extent of informality (the external dimension) to decline while returns to work in informality (the internal dimension) increase. In this situation, poverty rates in the sector would also decline. The policy challenge in this situation would be to devise a growth strategy that does not disturb this positive trend.

The worst-case scenario would be one in which the extent of informality is increasing and returns to work in informal jobs are declining. Here, the extent as well as the depth of informality would be rising, and working poverty in the sector would increase. The policy challenge would be the gravest in this worst-case scenario.

There are also two interim states, between the extremes.

The first would be where the extent of informality is declining but its depth (measured by returns to informality) is rising, as the real wages of those in informal employment would be falling. This would be akin to a situation in which the extent of poverty declines but its depth increases. Here, the policy challenge is to enhance returns to informality without reversing the declining trend in its extent or incidence.

The second interim case is where the extent of informality is increasing but so are the returns within informality. In this situation, if working poverty is also declining, there will be a trade-off and an associated policy challenge. That is, policies must be designed to reduce the extent of informality without affecting the trend of increasing returns to those engaged in informal jobs.

We investigate the welfare implications of recent changes in employment in Sri Lanka by assessing

the change in the nature of employment in the four broad economic sectors: agriculture, including fishing and mining; manufacturing or industry, including the production of electricity, gas, and water; construction; and all other services.

For the analysis, we use sectoral gross domestic product data from the Central Bank of Sri Lanka and microdata on employment, wages, and consumption from two national sample surveys. Of the two surveys, the primary source for labor-force-related data in Sri Lanka is the Quarterly Labour Force Surveys (LFSs) of the Department of Census and Statistics (DCS), from which national employment and unemployment statistics are estimated. But although the surveys have been conducted since 1990, reliable wage data for employees and information enabling the identification of informal workers according to internationally accepted criteria are available only from 2006 on. Therefore, to use the longest period possible, the years 2006 and 2014 were set as the end-points of the reference period. However, because the surveys gradually began to cover the conflict-affected Northern and Eastern provinces only as the war receded in 2008, they have been excluded from the analysis.

A critical component of the analysis of the welfare dimensions of employment change is the analysis of the change in working poverty. Because poverty is determined at the household level, for this part of the analysis, data from two of the DCS' Household Income and Expenditure Surveys (HIESs) are used that correspond most closely to the reference period determined by the availability of necessary labor force data from the LFS series. Thus, HIES 2006/07 and HIES 2012/13 are used for the analysis of changes in working poverty (DCS various years, HIES).

For poverty analysis, consumption data were adjusted for spatial differences in prices using the Laspeyre's price index³⁶ produced by the DCS using HIES data. The DCS estimated the official consumption expenditure-based poverty line by using the Cost of Basic Needs Approach as the poverty threshold.

³⁶ The DCS has computed district-based Laspeyre's price indexes for each HIES for the specific purpose of measuring poverty, by using the consumption patterns of 40% of households with the lowest consumption expenditure to construct the price indexes.

The Laspeyre's price index is more suited for deflating consumption to measure poverty than for measuring inequality, and is not a temporal price index. Therefore, for the analysis of inequality in wages, nominal daily cash wages were adjusted for spatial and temporal differences in prices with a price index constructed by applying the regression-based Country Product Dummy method to HIES data of 2006/07 and 2012/13.

The definition of employment the HIES uses is not time-bound and determines the employment status of the survey respondents only according to the individual's income source, as reported by the respondent. In contrast, the LFS determines employment status only after ascertaining the involvement of the individual in any form of economic activity through a series of tactical questions, and after verifying the duration of such involvement (Wickramasinghe 2009). As a result, the HIES figures for employment tend to be lower than the figures obtained from the LFS for the same survey year.

5.2. Sectoral Change in Employment and Skills Accompanying Growth

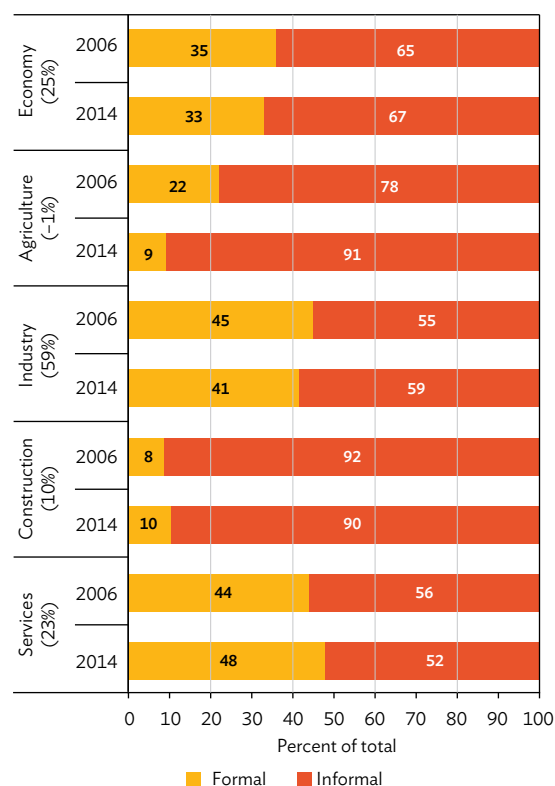
This section examines employment change across sectors along two dimensions. The first dimension concerns formalization. The second looks at the extent to which employment change across sectors has been accompanied by a change in the composition of workers' skills.

Formality is defined according to criteria enumerated by the 17th International Conference of Labour Statisticians (ILO 2016b). This defined informality in terms of jobs as well as enterprises. The criteria identify the following as being informally employed: family workers in formal enterprises, employees in informal jobs in the formal sector, own-account workers in informal enterprises or households, employers in informal enterprises, family workers in informal enterprises, and employees in informal enterprises or households.

The International Labour Organization's definition is more stringent than the one the DCS uses, as the

former encompasses employment in the informal sector rather than just informal employment. Formal and informal shares in employment for the whole economy have changed only very slightly over the reference period, with the share of workers in formal employment declining from 35% to 33% (Figure 5.1). However, a very different picture emerges at the sectoral level. Informal employment shares have increased and formal employment shares have declined in agriculture. In such a large sector (again, accounting for nearly one-third of employment), the decline in formal employment from 22% to 9% is significant. The movement of workers out of the formal plantations subsector, particularly into the services sector, may underlie much of this change. In agriculture, we find stable productivity, with an increased share of informal employment. In industry, too, formal employment shares have declined and

Figure 5.1: Distribution of Formal and Informal Employment by Economic Sector, 2006 and 2014



Note: Sample weights used. Figures in parentheses show the growth in productivity in each sector from 2006 to 2014.
Source: DCS (2006, 2015b).

informal shares increased, but with a significant rise in productivity. In contrast, construction shows a rise in the formal share of employment from 8% to 10%, with nondeclining or stable productivity. Only in the services sector has the formal employment share risen and informal employment declined, and this change is complemented by a rise in productivity. So, with the exception of services, the composition of employment in every sector of the economy has moved in favor of informalization. This is a significant finding, which is disguised by aggregate sectoral figures.

It is evident that informalization has been taking place beneath the relative stability of sectoral employment shares as well as rising productivity. This appears counterintuitive because informal workers are less likely to be productive than formal workers. One plausible explanation would be that the productivity of formal workers has been rising faster than that of informal workers.

Although the available data do not allow us to estimate productivity levels of formal and informal workers in each sector,³⁷ some inferences can be drawn from the data presented in Figure 5.1. It is apparent that productivity levels have slipped marginally in agriculture where the share of informal workers expanded and that of formal workers declined. In contrast, in the services sector, productivity levels rose while the percentage of formal workers increased. Both these observations are in line with what the theory would predict.

The manufacturing sector has experienced the most rapid rise in productivity levels even while the percentage of formal workers declined. This again may have been due to a greater concentration of formal workers in more productive industrial enterprises and subsectors, which pushed up average productivity levels in the sector at large, even though the concentration of workers in the less productive informal enterprises, which accounted for a large share of total industrial employment, caused the share of informal workers to rise in the industry sector as a

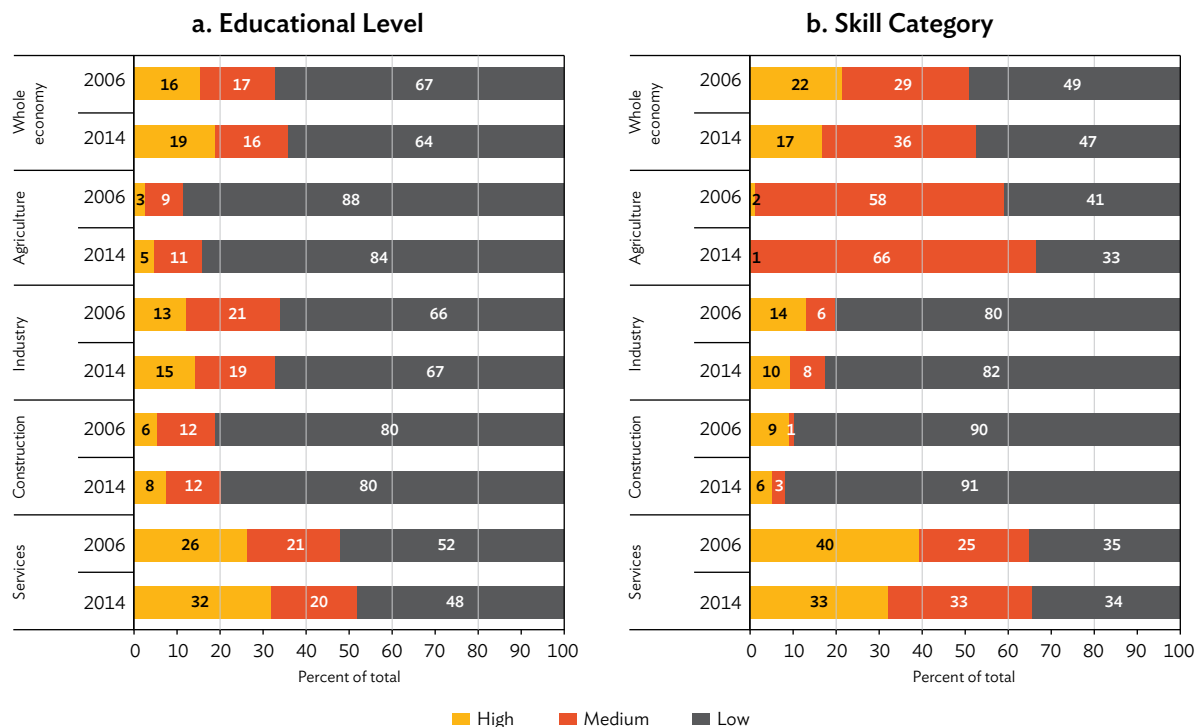
whole. Therefore, the reason productivity levels have been rising along with informality in the economy may be the relative expansion of formal workers in sectors and subsectors where productivity has also been rising.

Another reason productivity levels have risen along with informality may be the changing skills composition of employment. In fact, the second dimension of employment change that concerns us is the change in the composition of skills across sectors. For the analysis, we define skills according to occupation as well as the highest category of education attained.³⁸ There are interesting differences. From the point of view of education-based skills levels, the share of highly skilled workers has increased over the period economy-wide and in each sector, and the share of low-skilled workers has declined. The share of those with middling levels of education has remained stable (Figure 5.2, panel a). In the occupation-based skill categories, the shares of high-skilled workers have declined in the wider economy and in each sector. While the share of low-skilled workers has also declined economy-wide, there are key sectoral differences. The share of low-skilled workers has declined in agriculture and in services, but increased slightly in industry and construction. The shares of middle-level occupations have expanded significantly across the board (Figure 5.2, panel b). The changes in the educational structure of employment appear to complement rising labor productivities across sectors (other than agriculture), as observed earlier. Increasing skills underwritten by better education are likely to have pushed up productivity levels. But the composition of employment by occupation skill level suggests that the rise in educational attainment at the lower end of the scale of educational attainment over the reference period has seen an expansion of the share of the middle segments of the distribution of occupations, thereby eating into the shares of high-skilled occupations in the distribution.

It is also evident that levels of educational attainment among both formal and informal workers have risen across sectors, and may be an additional reason

³⁷ The DCS' Annual Survey of Industries and Annual Survey of Construction Industries collect data on output and employment, but not on criteria required to distinguish between formal and informal enterprises, even if only by size (establishments larger than 5 employees, and separately, establishments larger than 25 employees). There is no survey of establishments that covers the services sector.

³⁸ High-skilled workers are defined by occupation as those in the management, professional, and technician categories and by education as those with General Certificate of Education Advanced Level qualifications or more. Medium-skilled workers are defined as those in clerical, sales, and skilled agricultural and fisheries occupations, or those who have passed their Ordinary Level examination but have not obtained Advanced Level qualifications in education. Low-skilled workers are defined as craft workers, machine operators and assemblers, and elementary workers, or those who have not progressed beyond secondary education.

Figure 5.2: Distribution of Employment by Skill Level across Economic Sectors, 2006 and 2014

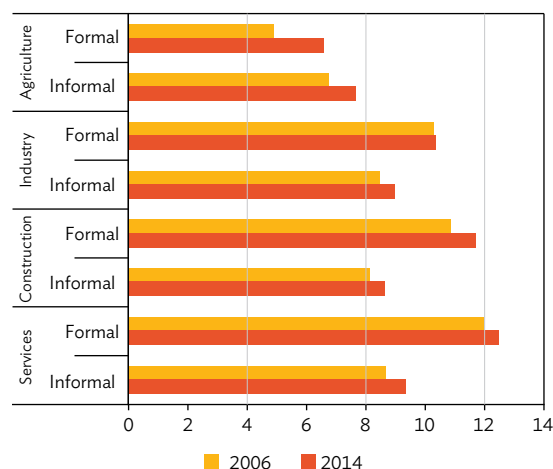
Note: Sample weights used.

Source: Estimated using microdata from the DCS' Quarterly Labour Force Survey 2006 and 2014.

productivity levels have been rising along with informality in the economy at large.

Figure 5.3 shows that formal and informal workers in the services sector have the highest number of average years of education, and workers in agriculture, whether formal or informal, have the lowest. Workers in all sectors were better educated in 2014 than in 2006, other than in the formal industry sector, where mean years of schooling have remained stable at slightly more than 10 years. This suggests that better education across the board helped increase productivity levels even in sectors and subsectors with greater concentrations of informal workers.

A point to note is the distribution of formal and informal employment, and education levels of workers, in the agriculture sector. Unlike in the other three sectors, the informal agricultural workers are better educated than the formal workers, even though formal workers, being the least educated across the board, have nevertheless

Figure 5.3: Average Years of Education, Formal and Informal Workers, by Economic Sector, 2006 and 2014

Note: Sample weights used.

Source: Estimated using microdata from the DCS' Quarterly Labour Force Survey 2006 and 2014.

experienced the greatest educational gains. This result is due to the particular circumstances of the plantation workers of foreign origin. While their education levels had been historically lower than those among other groups, their educational attainment has risen in recent years. That factor may have also driven some of their migration out of agriculture into other economic sectors as their job aspirations and employability in other sectors rose with better education.

To sum up the main findings of this section, it is apparent that output growth and rising productivity in every sector of the economy has been accompanied by near stability of employment shares. This relative stability disguises ongoing informalization and the movement of the workforce to higher skill levels in each sector. This twin process of informalization and “up skilling” across sectors is also consistent with the profiles of changing labor productivity in all sectors other than agriculture during the reference period.

The first lesson is that rising productivities and skills profiles do not necessarily mean greater formalization of the economy. The positive external changes in productivity and skills have been accompanied by a rising informalization in the economy. But how have the upgrading of skills, raising of productivity, and increased informalization translated into the welfare of workers expressed in terms of incomes and wages? The welfare dimensions of these transformations are investigated in greater detail in the next section.

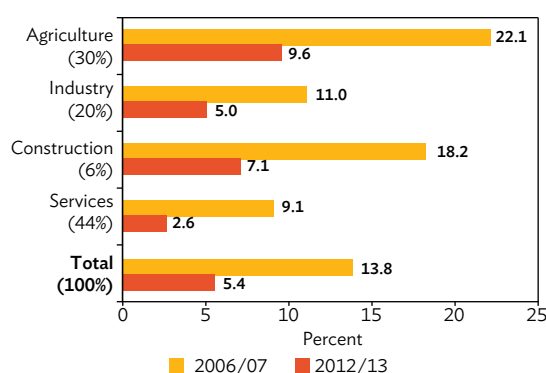
5.3. Changes in the Working Poor

The incidence of working poverty (i.e., the percentage of employed people who belong to poor households) halved between 2006/07 and 2012/13, from 13.8% of employed people, to 5.4% or 318,727 workers in 2012/13 (DCS 2008, 2015b). Working poverty rates declined in all four sectors (Figure 5.4). A notable feature of this change concerns the composition of working poverty, which has shifted across sectors. Agriculture's share of the working poor has increased, from 47% to 53%, and so has industry's much smaller share, from 14% to 18% (Figure 5.5). While construction's contribution to working poverty declined marginally, from 9% to 8%, the contribution of the service sector to working

poverty declined significantly, from 31% to 21%. We next assess the change in welfare experienced by particular categories of workers usually associated with informality and the working poor.

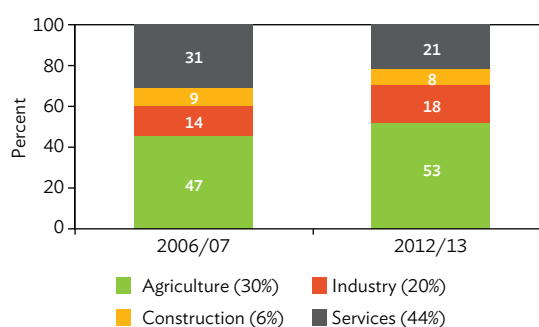
Self-employment is to a great extent informal in many developing countries, but it is a difficult category to

Figure 5.4: Working Poverty Rates across Economic Sectors, 2006/07 and 2012/13 (%)



Note: Northern and Eastern Provinces are excluded. Figures in parentheses show the distribution of total employment across sectors. Consumption data were adjusted for spatial differences using the Laspeyres' price index produced by the Department of Census and Statistics using the same data to estimate poverty incidence. The national poverty line was used to identify the threshold of consumption poverty.
Source: Estimated using microdata from the Department of Census and Statistics' HIES 2006/07 and 2012/13.

Figure 5.5: Share of the Working Poor by Economic Sector, 2006/07 and 2012/13



Note: Northern and Eastern provinces are excluded. Figures in parentheses show the distribution of total employment across sectors. Consumption data were adjusted for spatial differences using the Laspeyres' price index produced by the Department of Census and Statistics, using the same data to estimate poverty incidence. The national poverty line was used to identify the threshold of consumption poverty.
Source: Estimated using microdata from the DCS HIES 2006/07 and 2012/13.

assess. It tends to transform over time with growth, but in developing countries with dualism and underemployment, self-employment largely remains a reserve of surplus low-productivity labor.

While working poverty rates among this category of workers have also declined over the period, from 11.1% to 3.9%, self-employment accounted for a smaller share of the total number of those employed and in poverty, at 18.8% in 2012/13, down from 21.8% in 2006/07 (Figure 5.6).

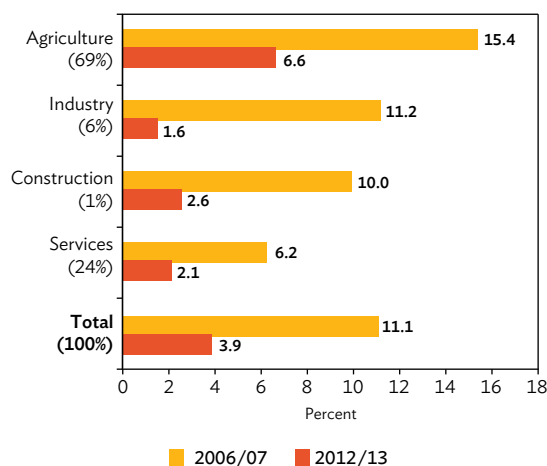
People whose main occupation is in self-employment may also be engaging in casual labor as a secondary occupation, particularly if they are in agriculture. This can change as countries move toward middle-income status, when self-employment becomes less characteristic of surplus labor at the household level. We see no evidence of this transition in Sri Lanka, where LFS data indicate that self-employment has increased everywhere, by more than the economy-wide average of 50% in construction and agriculture

(73% and 66%), and by less than the average in industry and services (44% and 32%). However, real labor earnings rose from 2006/07 to 2012/13, other than in industry, where earnings contracted by about one-fourth (Figure 5.7).

On the other hand, casual employment among employees accounts for half of total wage employment, and this share has increased in absolute terms by 30% across all sectors over the reference period (Figure 5.8).⁴⁹ And even though the number of such workers has grown most slowly in the services sector (by 21%), this sector is the largest employer of such workers (40%).

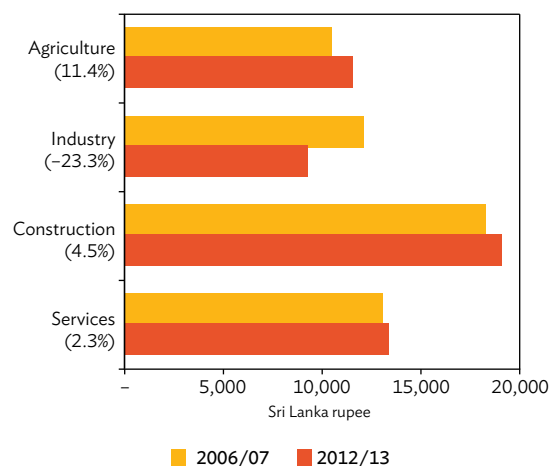
Average casual daily cash wages appear to have increased significantly in real terms in every sector, with real wages in agriculture rising most, by 199% (Figure 5.9). Therefore, while the incidence of casual labor has increased, the adverse effects of this change on welfare have been somewhat mitigated by rising real wage rates among this group of workers.

Figure 5.6: Working Poverty Incidence among Self-Employed Workers by Economic Sector, 2006/07 and 2012/13



Note: Northern and Eastern provinces are excluded. Figures in parentheses show the distribution of total number of working poor across sectors. Consumption data were adjusted for spatial differences using the Laspeyres' price index produced by the DCS, using the same data to estimate poverty incidence. The national poverty line was used to identify the threshold of consumption poverty.
Source: Estimated using microdata from the DCS' HIES 2006/07 and 2012/13.

Figure 5.7: Average Real Labor Earnings of Self-Employed Individuals, by Economic Sector, 2006/07 and 2012/13



Note: Northern and Eastern provinces are excluded. Figures in parentheses show growth rates in real monthly earnings in each sector. Earnings data are adjusted for temporal and spatial differences using the CPD method based price index using Household Income and Expenditure Survey 2006/07 and 2012/13 data.
Source: Estimated using microdata from the DCS' HIES 2006/07 and 2012/13.

⁴⁹ Defined here as employees who do not have permanent tenure. These workers are either without a permanent employer or are working in temporary or casual jobs.

The changes in sectoral shares of noncasual wage employees are remarkably similar. However, in all sectors other than agriculture, casual wage growth has outstripped noncasual wage growth. In agriculture, noncasual wages grew by 254% during the reference

period; among casual workers, cash wages grew by a still substantial 199%.

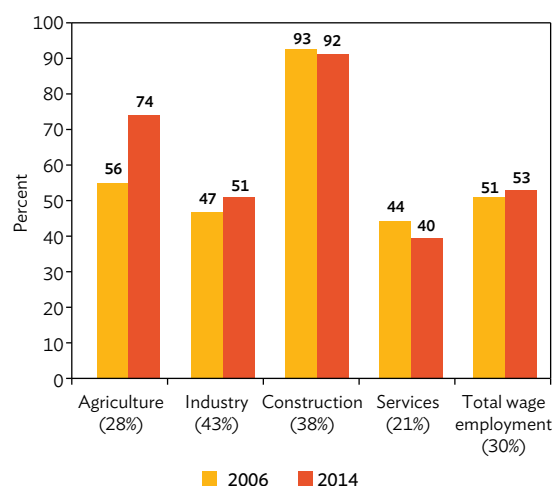
5.4. Wage Growth and Wage Inequality in Formal Employment

Even while the real wages of casual employees across sectors grew, low-skilled workers in the formal sector have experienced the fastest wage growth among formal workers. Between 2006 and 2014, economy-wide average daily real cash wage rates among low-skilled formal workers nearly trebled—they grew by 198%—whereas they only doubled for formally employed high-skilled workers. Consequently, inequality declined.⁴⁰

Figure 5.10 shows that no matter which inequality index one uses—the more familiar Gini coefficient; the decomposable General Entropy Indexes; or the measure that satisfies all axioms of a good inequality measure: the Variance of Log of Real Daily Cash Wages—wage inequality has declined among formal employees.

Inequality across each skill category by both occupation-related and education-related skill

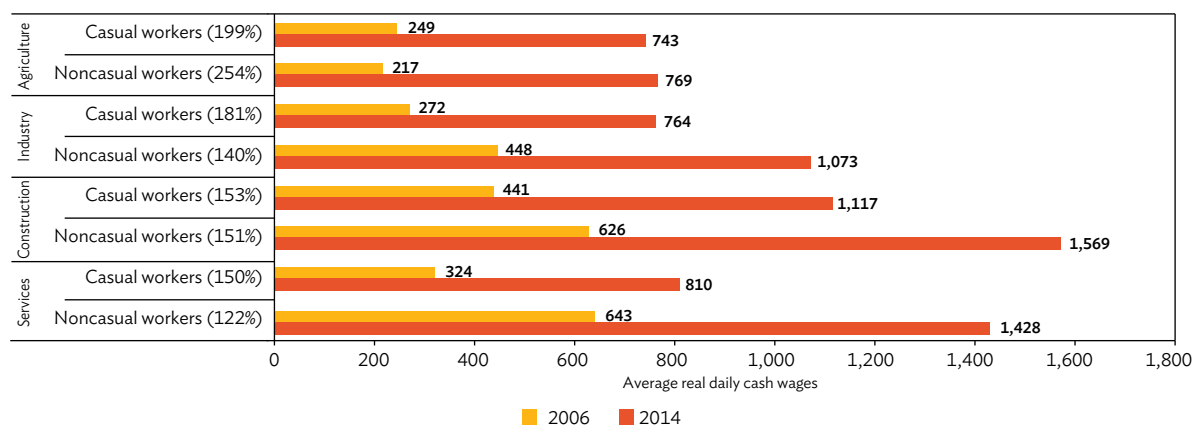
Figure 5.8: Share of Casual Employment in Total Wage Employment across Economic Sectors, 2006 and 2014



Note: Northern and Eastern provinces are excluded. Figures in parentheses are the growth rates in casual employment experienced in each sector.

Source: Estimated using microdata from the DCS' Labour Force Survey 2006 and 2014.

Figure 5.9: Real Daily Cash Wage Growth among Casual and Other Workers, 2006 and 2014



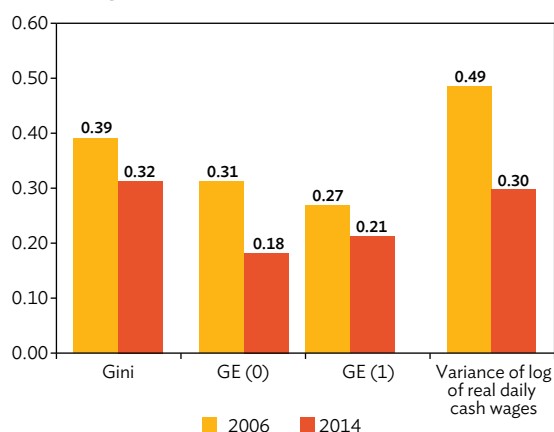
Note: Northern and Eastern provinces are excluded. Wage data are adjusted for temporal and spatial differences using the country-product-dummy method based price index using Household Income and Expenditure Survey 2006/07 and 2012/13 data.

Source: Estimated using microdata from the DCS HIES 2006 and 2014.

⁴⁰ Tail inequality in real cash wages declined significantly, with the p90/p10 ratio dropping from 5.9 to 3.6 while General Entropy (o) declined from 0.31 to 0.18. The Gini coefficient also declined, from 0.39 to 0.31.

category also declined (Figure 5.11). The Gini declined more significantly in agriculture, industry, and construction than it did in the services sector.

Figure 5.10: Change in Wage Inequality among Formal Employees, 2006 and 2014



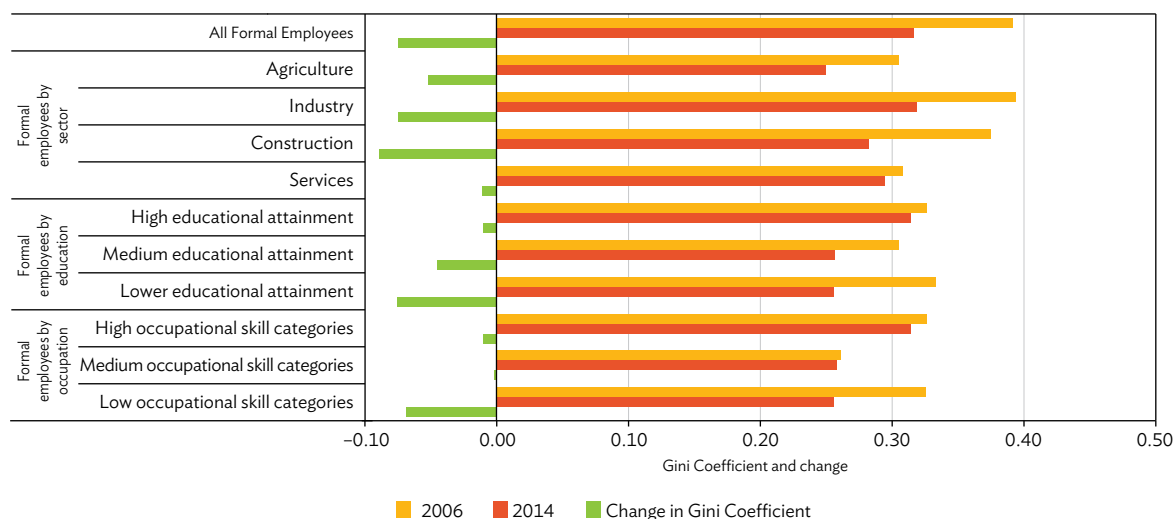
Note: Northern and Eastern provinces are excluded. Wage data are adjusted for temporal and spatial differences using the country-product-dummy method based price index using Household Income and Expenditure Survey 2006/07 and 2012/13 data. Source: Estimated using microdata from the DCS HIES 2006 and 2014.

5.5. Conclusions and Policy Implications

Sri Lanka's economy is experiencing a sustained growth in output that has not, however, catalyzed significant changes in the sectoral employment structure. The foregoing descriptive analysis shows how output growth and productivity increases in almost all sectors of the economy (productivity remained unchanged in agriculture) have been accompanied by stable employment shares across sectors. This is balanced growth. However, balanced growth and the stability of sectoral employment can disguise other dynamics of a changing employment situation.

To look at the transformation in employment, this chapter examined the change in employment from the point of view of skills and formalization. The direction of the shifts in employment is quite clear: workforces in each sector are becoming better educated and the shares of the middle-level occupations are expanding at the expense of the shares of both high and low occupation categories.

Figure 5.11: Changes in Wage Inequality among Formal Employees by Sector and Skill Category, 2006 and 2014



Note: Northern and Eastern provinces are excluded. Wage data are adjusted for temporal and spatial differences using the country-product-dummy method based price index using Household Income and Expenditure Survey 2006/07 and 2012/13 data. Source: Estimated using microdata from the DCS HIES 2006 and 2014.

Nevertheless, employment has become more informal in every sector except construction and services. Working poverty has declined, average daily cash wage rates of casual workers have increased, and the wage dispersion across sectors and within skill groups in formal employment has improved overall at the macro level. Recalling the four-fold typology of welfare change with which we began this chapter, we are in a position to determine whether the changes in employment in each of the four sectors have been unambiguously good, unambiguously bad, or somewhere in between.

In the agriculture sector, we found that the share of informal employment has increased from 78% to 91% from 2006 to 2014,⁴¹ but that casual wages in the sector have also increased. Working poverty in agriculture has declined substantially, from 22.1% to 9.6% between 2006/07 and 2012/13. Positive developments have been overshadowed by the extent of informality in the sector, the fact that informality has been increasing, and the slight decline of productivity levels. Thus, in terms of the four-fold typology, agriculture typifies the second interim case where informality is increasing but returns within informality are also increasing. In this situation, because working poverty has also declined, there is a trade-off and an associated policy challenge. That is, agriculture policies must be designed to reduce the extent of informality without affecting the direction of change in indicators of returns to employment of those engaged in informal agricultural jobs.

Changes in industrial employment outcomes also fall into the same interim type of change that characterizes the changes in agriculture. Informal employment's dominance in the sector has increased from 55% to 59%. But in industry, productivity has risen rather than fallen, and casual wage rates have also risen while working poverty declined from 11% to 5%. Thus, in this sector, some improvements in the depth indicators have been counteracted by the rise in the scale of informality.

On the face of it, construction may appear to qualify as the best case in the fourfold typology of unambiguously positive changes. The share of informal employment has fallen from 92% to 90%, casual wages

have risen, and working poverty has fallen from 12.6% to 7.1%. While this is indeed an unambiguous case of improvement, it is also quite clear that the levels of informal employment are so high—in fact the highest in all the sectors—that the unambiguous improvement makes only a small dent in the scale of the problem.

In contrast, the services sector appears to showcase an unambiguous case of improvement in both extent and depth. The share of informal employment has fallen from 56% to 52%. Casual real wages have also risen significantly, even though more slowly than in other sectors. Working poverty has declined from 9.1% to 2.6%. However, the question of how sustainable this may be is an important one. The positive changes may have something to do with the expansion in the share of the public sector total employment in the services sector from 26% to 29% in 2014.

Sri Lanka has been prone to distributional conflict at least since the first youth insurrection of 1971, and as a society that has only recently emerged from a decades-long conflict that began over issues of distribution related to jobs and resources, the country remains vulnerable to conflict. Policy makers cannot afford to be complacent about the current economic growth and slow structural transformation, as they also need to recognize that a new source for social instability and conflict lies in growing informal employment. Working poverty may have declined among informal workers, but many workers are still unlikely to have decent incomes and even less likely to have job security. Decent incomes and job security are important expectations that working people have in middle-income economies.

While internal transformation in one important aspect of informal work (rising real wages and a decline in working poverty) is both a critical and welcome development, it does not mean that the transition to formality is being affected robustly. The extent of formal employment is low, and changes in its incidence are slow in Sri Lanka. The high incidence of informality is a major challenge to the rights of workers and decent working conditions as most workers are in informal employment not by choice, but by circumstance. It

⁴¹ The increase in informality may be due to workers moving out of the formal plantations into other jobs.

also has a negative impact on enterprises, public revenues, the government's scope of action, the soundness of institutions, and fair competition. Therefore, transition from informality to formality is essential for inclusive development and decent work for all. In fact, the analysis in this chapter suggests that the most pressing employment challenge that Sri Lanka faces is transitioning from informality to formality.

There may be many reasons why the growth of formal employment is constrained and the transition to formality has regressed in some respects. The law governing retrenchment makes it very costly for firms with more than 14 workers to lay them off, and has been identified by many as an underlying reason for low rates of job creation in formal enterprises (see Abidoye, Orazem, and Vodopivec 2009). The Inland Revenue Act and the Payment of Gratuities Act become operative at the threshold of 15 workers.

Issues related to law and order, uncertain government policy, macroeconomic instability, high cost of obtaining external financing, and serious infrastructure constraints in electricity generation and transport have also been identified as inhibiting formal job growth (World Bank 2005, ADB 2005). More recent work has drawn attention to the role of skills gaps in constraining economic expansion (Dutz and O'Connell 2013; Dundar et al. 2014). Meanwhile, the country's system of labor administration is weak, constrained by insufficient cadres, and low levels of remuneration and motivation (Chandrasiri and Gunatilaka 2015).

These factors suggest that the structural transformation that needs to take place in a country that is on the cusp of becoming a full-fledged middle income country has to be supported by legislative and institutional complements, including those related to social security. In line with the International Labour Organization's Recommendation 204 concerning transition from the informal to the formal economy, Sri Lankan policy makers need to first assess and diagnose the factors, characteristics, causes, and circumstances of informality in the national context. The policy makers also need to adopt, review, and enforce national laws and regulations to ensure appropriate coverage and protection of all categories of workers and economic units. The imminent decline in the share of the working-age population makes the implementation of decent work standards both imperative and urgent even from an economic efficiency point of view. To facilitate the transition to the formal economy, an integrated policy framework needs to be included in national development strategies and plans as well as in poverty reduction strategies to ensure coherence and coordination across different levels and entities of government.

Workers have, of course, the most to gain from such a transformation. By moving to formal employment, they can look forward to decent work, access to social protection, and working conditions that ensure safety and health. Employers can hope to gain a level playing field so that businesses can compete fairly with one another. By effecting such a transition, the government would acquire a revenue base for tax collection, improve working conditions, and enhance social justice and stability.

Chapter 6

Concluding Remarks

Sri Lanka has enjoyed relatively good economic growth in the last decade despite several internal and external shocks that dampened financial growth. The country achieved middle-income status in 2010 and is on its way to achieving upper middle-income status in the next few years. To help Sri Lanka transition to upper middle-income country and beyond, the government laid out a policy development program in 2017 that aims to achieve a modern, globally competitive, and high value-adding economy, to be accomplished through the creation of jobs, expansion of the middle class, and improved living standards of workers. This report examined in some detail the state of employment and education in Sri Lanka and puts forth several policy recommendations to address issues and bottlenecks identified that may hinder the country from reaching its goal. The report also examined how the country's economic growth has impacted job creation and poverty and inequality reduction.

Several findings dominate the narrative. First, with the expected contraction of the labor force, the government could consider devising more ways of encouraging females to join the labor force. The country's female labor force participation rate has been historically low, and Sri Lanka does not have full legal equality for women in the work place. This report estimated that raising the female labor force participation rate to the average level observed in

high-income countries would increase the overall labor force by 17%, which would be adequate to replace decades of labor force reductions brought by population aging. This study has identified several policy recommendations to encourage female labor force participation, such as the creation of policies that encourage employers to hire female workers on flexible time basis and the provision of subsidized childcare. Receipts of remittances from abroad as well as the earnings of the male household members are identified as disincentives for married women to enter the labor market.

Second, for Sri Lanka to continue its transition as a middle-income emerging economy, it will have to rely on efficiency-driven productivity growth. This calls for a concerted effort to align the country's education with the skills and knowledge that the labor market demands, to ensure that students are equipped for work after leaving school. The country is on the right track with its medium-term strategic plan, which focuses on increasing equitable access to primary and secondary education, improving the quality of primary and secondary education, and strengthening governance and service delivery in the education sector. The government should encourage more privately run technical and vocational education and training (TVET) institutions to enter the market. For TVET, this report proposes adopting a voucher system

as a means of both funding TVET education and linking graduates with relevant industries. The study also pushes for reforms to the school and university curricula by introducing more market-oriented subjects such as information and communication technology and technological subjects that are deemed essential skills in today's marketplace. It is also crucial for the government to provide resource support, in the form of skilled teachers and equipment. To address the labor market information gap among school leavers, it is important to identify innovative, rapid, effective, and feasible strategies of reaching early school leavers so they can be equipped with the vocational skills necessary to take on productive jobs and contribute to economic growth.

Third, the country is facing an aging population, which will slow the growth of the labor force, and possibly cause it and the economy as a whole to contract (resulting in a reduction of 7% in gross domestic product by 2030). This study predicts that aging will put modest pressures on pension and health expenditures, and the government still has to take the steps necessary to ensure that the country transitions well into this phase. Maintaining a strong public delivery component and public spending at about 50% of total health spending may be sufficient to cope with most aging pressures until 2030, but there will be some need for an overall spending increase, possibly in the range of 0.5% of gross domestic product. Moreover, given the substantial unmet demand and the impending rise in spending for residential long-term care, development of policy and planning for expanding residential long-term care

should begin as soon as feasible. In a similar vein, in light of increasing life expectancy, the government may consider increasing the official retirement age from 60 to 65 to allow adult workers to continue to contribute to national savings, as well as potentially to reduce poverty among the elderly by leading to greater asset accumulation. The government's plan for modernization will greatly help in this regard, and ideally would reduce the dependence of work on physical strength and health.

Fourth, despite recent economic gains and the advances in reducing poverty and inequality, Sri Lanka's economy is undergoing some informalization, posing a major challenge to workers' welfare and their rights to decent work, and negatively impacting enterprises, public revenues, and the soundness of institutions and fair competition. Therefore, one of the most pressing employment challenges that Sri Lanka is facing is transitioning from informality to formality. This report proposes undertaking an assessment and diagnostic study to determine the characteristics, causes, and circumstances of informality in the national context. The government would also need to adopt, review, and enforce national laws and regulations to ensure appropriate coverage and protection of all categories of workers, whether they are in the formal or the informal sector. Such policies and regulations need to be included in national development strategies and plans as well as in poverty reduction strategies in order to ensure coherence and coordination across levels and entities of government.

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Sri Lanka: Fostering Workforce Skills through Education

Employment Diagnostic Study

Empowered Sri Lanka, Sri Lanka's development policy document, envisions reorienting the country toward a modern and high-value-adding economy that is able to compete in the global market. Expanding the middle class and improving the living standards by creating one million jobs are at the core of the policy. This report seeks to support the realization of that vision by analyzing Sri Lanka's employment situation and drawing recommendations from the analysis. The report starts with an overview of the labor market in relation to both supply and demand. It then looks at the issues of aging and skills generation. The concluding chapter examines links between labor market trends, informality, and poverty.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to a large share of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

About the International Labour Organization

The International Labour Organization (ILO) is the United Nations agency for the world of work. It sets international labor standards, promotes rights at work, and encourages decent employment opportunities, the enhancement of social protection and the strengthening of dialogue on work-related issues. The ILO has a unique structure, bringing together governments, employers' and workers' representatives.



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